Planning and Publicizing the CHIP

by

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Abstract

Sponsored by the City of Worcester Division of Public Health (DPH), this project assessed the feasibility and logistics of a walk on behalf of the Community Health Improvement Plan (CHIP). Our research concludes that a walk from six surrounding towns converging for a rally at the DCU Center would best celebrate the advances made toward the goal of the Greater Worcester area becoming the healthiest region in New England by 2020.
Acknowledgements

The success of our project depended largely on the contributions of many individuals and organizations. We would like to take the time to thank all of those who have helped and supported us throughout this process.

First, we would like to thank our sponsor, Dr. Michael Hirsh with the City of Worcester Division of Public Health (DPH), for allowing us the opportunity to work on this project. The direction and supervision he provided were indispensable for the completion of our project. Along with Dr. Hirsh, we would like to thank the DPH staff, especially Karen Clark and Erin Cathcart, for their hospitality. We would also like to thank Dr. Waldo Zamor and Evan Pagano of UMass Medical, who took time out of their busy schedules to attend meetings and assist in the development of the CHIP Walk & Rally.

Special thanks should be given to Ann Gibbons-Smith and the Central Massachusetts Housing Alliance for sharing key insight into the world of walk and event planning. Due to her guidance, we were able to formulate a more accurate preliminary budget to propose to our sponsor.

We especially would like to thank Laura Roberts, with the Worcester Community Project Center, for proposing the idea of a radial converging walk, which we ultimately adopted as the final route plan. This idea was posed to us half way through the completion of our project, and truly directed the remainder of the course of our work.

Final thanks go to our Worcester Polytechnic Institute advisor: Professor John Zeugner, for his much needed guidance throughout the project. The information he shared with us throughout this process along with the time he took to ensure that we stayed on track was received with eagerness. We would also like to acknowledge the contributions of Corey Dehner who supplied us with vast resources and ideas in preparation for the project.
Executive Summary

In the year 2012, the City of Worcester Division of Public Health (DPH) partnered with more than 90 other community groups to create the Community Health Improvement Plan, commonly known as the CHIP. The primary goal of the CHIP is to improve population health, building on previous plans and initiatives to educate and assist those in the Greater Worcester area toward becoming the healthiest region in New England by the year 2020 (2013 Greater Worcester Region Community Health Improvement Plan). The plan focuses on the prosperity of the seven municipalities of the Greater Worcester area, specifically the towns of Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston and the city of Worcester.

The region and its partners have identified health-related needs and strengths of the Greater Worcester area, and from this preliminary information the DPH developed the first annual Community Health Assessment (CHA) and CHIP reports. Each of these annual reports were made available to the public, therefore they must be a true representation of the community at large. The 2015 Greater Worcester Region CHA is scheduled to be completed in October of 2015, and will prompt the development of the 2016 CHIP. To parallel the community health effort, we have planned a CHIP Walk & Rally to take place in conjunction with the release of the 2016 Greater Worcester Region CHIP report. This event will highlight and celebrate the progress made since the formation of the first 2012 CHIP, as well as inspire future progress with the CHIP mission of:

“The healthiest you, in the healthiest city, in the healthiest region.”

The overarching goal of this project was to plan and publicize the CHIP Walk & Rally, an event that is an outlet of knowledge expressing the advances made annually in accordance with the Community Health Improvement Plan.

Methodology

To meet our project goal, we developed the following research and planning objectives:

1. Understand the CHIP and DPH goals and services.
2. Assess the feasibility of the CHIP Walk event as a whole.
3. Geo-map various CHIP Walk route plans that will allow for the easiest pedestrian transportation.
4. Identify key locations, local businesses, and potential community partners along each route.
5. Identify public safety departments and event permits.
6. Determine methods of promotion to garner support and awareness.
7. Preliminary development of the CHIP Rally.
To successfully plan the CHIP Walk we assembled event ideas, drove throughout the Greater Worcester area, conducted informational research, and reviewed past health reports. During our field work, we encountered various challenges. One of the biggest challenges was geo-mapping the potential walking routes. We were able to successfully brainstorm and develop two options for the CHIP Walk before finalizing on Plan C: The Convergence Route.

Findings and Analysis

Through our extensive research and analysis, we have developed the following series of findings regarding the planning and publicizing of the event:

1. **The DPH is deeply committed to the CHIP and its continued role within the Greater Worcester area.**
   The City of Worcester Division of Public Health and the Central MA Regional Public Health Alliance annually develop a CHA report that strives to evaluate how the health of the region has changed since 2012. Following each CHA report, the DPH begins a CHIP planning process that focuses on sustaining all achievements made through the community.

2. **A CHIP Walk of approximately 20 miles in length was deemed infeasible.**
   Three routes, roughly 20 miles in length, were created to traverse anywhere from two to four communities within the Greater Worcester area. We concluded that the length of a 20 mile walk would not attract many participants, and the overall concept of a 20 mile route traversing only a few of the seven municipalities does not display unity among the communities.

3. **A CHIP Walk of approximately 3 miles in length was deemed infeasible.**
   We developed seven small walks that looped through or around the center of each participating town. However, our sponsors felt that this option lacked the sense of unity and togetherness needed for an event promoting the Greater Worcester CHIP.

4. **Plan C: The Convergence Walk is the most unifying of the 3 plans, as it has the ability to incorporate a celebration rally.**
   The third plan devised was Plan C: The Convergence Walk. This plan encompasses starting points in each of the seven towns, converging on one central end location of the DCU Center.

   We chose Plan C: The Convergence Walk for a variety of reasons. This plan includes routes that are much shorter than Plan A: 20 Mile Routes, but longer than Plan B: Community Routes. Secondly, the walk includes all seven communities, each route converging at the DCU Center and thus promoting the “togetherness” factor
strived for by the DPH and CHIP. The idea of a rally at the DCU Center will inspire good health and well-being, and was an added dimension that the other two options simply did not have. For all of these reasons, the Convergence Walk was deemed the most feasible and promising option.

5. **The DCU is an accommodating location for the rally event.**
The DCU Center located in Worcester, MA has numerous features that make it a viable host for an event such as The CHIP Walk & Rally. Specifically, the exhibition hall has 58,960 square feet of contiguous space that will be an excellent location for tables, booths, music, and entertainment. Further, for more intimate activities, the meeting room space will be utilized.

6. **The preliminary budget estimate is predicted to be at least $51,950.00.**
Valuable budget insight was obtained through a meeting with Ann Gibbons-Smith, the Assistant Executive Director of the Central Massachusetts Housing Alliance Inc. (CMHA). With all budget estimates totaled, we arrive at a potential final budget of $51,950.00. For the details of our calculations and the process by which we reached our cost figures for police details, permits, bus rentals, and other expenses please see Chapter 4, Finding 5 and Appendix C.

Recommendations
Based on our research and findings, we deemed the CHIP Walk to be feasible, and have performed preliminary steps to plan the community-wide event. We propose the following series of recommendations for a follow-up project:

1. **Formulate project teams to complete the CHIP Walk & Rally.**
   To successfully complete the development of the event, we suggest two follow up project teams to be assembled in B and C Terms of Worcester Polytechnic Institute’s 2015-2016 academic calendar. However, if WPI is unable to provide a follow up IQP team of students, we suggest our sponsor, Dr. Hirsh, utilizes academic resources and seeks additional help from affiliate students at UMass Memorial Medical Center and Clark University.

2. **Understand the primary vision of the CHIP and DPH.**
   Before proceeding with the development of the project, we recommend each team fully understands the primary vision, goals, and services of the City of Worcester Division of Public Health and the CHIP. We also recommend reviewing and following up with the most recent reports, the 2015 Greater Worcester Region CHA and 2016 Greater Worcester Region CHIP.

3. **Request approval from participating towns for the CHIP Walk event.**
The event is still within its preliminary stages due to the necessity of requesting approval from the seven towns within the Greater Worcester area. We recommend
acquiring approval as soon as possible from each town, especially the City of Worcester due to the large amount of people who will be traveling into the downtown portion of the city. Once approval is granted, all other plans may be carried out with certainty.

4. **Coordinate the date, budget, and specific location in the DCU Center.** Choosing a date for the event and booking a specific location inside the DCU Center are important tasks needed to make the CHIP Walk & Rally a reality. When booking the space within the DCU center, the budget should be taken into account and negotiated if possible. We also recommend the organization of the budget to avoid any financial problems that may arise.

5. **Obtain all necessary permits.** Large-scale walking events that attract a great amount of people require parade permits. We suggest obtaining any permits necessary for the event once the date and official location of event have been chosen.

6. **Contact local businesses and potential partners, colleges and youth schools, and public safety departments along each route, located in Appendix A.** Local businesses and potential partners have the ability to fundraise toward the budget and spread individual health-related knowledge at the event by having a table or booth within the DCU Center. We suggest contacting all local businesses and potential partners listed in Appendix A1, A2 and proposing the possibility of sponsoring the event. We also recommended contacting all colleges (Appendix A4) and public youth schools (Appendix A5). Due to the need for roadside safety during the walking portion of this event, we suggest contacting the police departments within each participating community and coordinating police escorts for each route. The full listing of each department is listed in Appendix A5.

7. **Promote the CHIP Walk & Rally through social media, distribution of flyers, and local media outlets.** Once the final steps have been completed, it is essential that the project teams begin advertising the event to the public. To attract a number of participants, we suggest distributing flyers to all local businesses and schools within the Greater Worcester area. Further, we have created a prototype website, located in Appendix E that provides event details and social media links. Lastly, we recommend contacting local media outlets such as television stations, radio stations, and newspapers. These local outlets will directly reach out to the target community and provide a low cost publicity option.
These suggestions, if implemented, will successfully complete the construction of the CHIP Walk & Rally. In addition, we hope that our research will assist in the creation of this large scale event and in turn, provide a celebratory educational outlet to the Greater Worcester area. This research has the potential to be used to display the preliminary and secondary steps needed to plan a walk and rally event of this magnitude.
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Chapter 1: Introduction

“Some kids have never seen what a real tomato looks like off the vine. They don’t know where a cucumber comes from. And that really affects the way they view food.”

- Michelle Obama, United States First Lady

Children who grow up in the city of Worcester typically are not accustomed to sidewalks lined on both sides by grass, but rather by streets filled with cars. A majority of parents don’t have the luxury of sending their children out in the yard for fresh air to play and be active. Gardens that are typical of suburban area homes aren’t common in cities like Worcester; therefore children are more likely to grow up never knowing that an apple comes from a tree rather than the market. As First Lady Michelle Obama put it, the fast-pace life of a city causes people to quicken every aspect of their lives, including eating unhealthy foods because they are convenient, cheap, and rich in artificial flavor. However, improvements are seen in the form of increased farmers markets, education, and healthy events, enabling Worcester and the six surrounding towns in the region to regain a health conscious state.

In the year 2012, the Central Massachusetts Regional Public Health Alliance (CMRPHA), led by its lead agency, the City of Worcester Division of Public Health, partnered with Common Pathways, UMass Memorial, and 90 other community groups to create the Community Health Improvement Plan, commonly known as the CHIP. The primary vision of the CHIP is that Worcester will become the healthiest city and CMRPHA the healthiest region in New England by 2020 (2013 Greater Worcester Region Community Health Improvement Plan). The plan focuses on the overall prosperity of the municipalities of CMRPHA, which includes the communities of Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston and Worcester. In recent years, commitment to the long-term health and well-being of the diverse community has gained support and awareness, but is in need of an inspiring health event.

As a fairly new plan developed in 2012, the CHIP is the first documented attempt to combat unhealthy living in the Greater Worcester region. Between the years 1980 and 2010, the population in Worcester saw large spikes in inflows and growth, seemingly adding to the diversity of the communities. Mainly Hispanics, African Americans, Asians, and Native Americans have increased the most in size out of the ethnic groups present in Worcester. These inflows into Worcester have brought in many different cultural practices and habits with regard to public health, making the health relationship between ancestry and ethnicity very evident. In the past, exposures to unhealthy and negative practices were more common among children and adults;
therefore the implementation of healthier habits has become more desirable. Recently there has been more focus on public promotion in the form of events.

According to the 2012 Health of Worcester report, in comparison to the adult population of Massachusetts as a whole, Worcester’s adult population recorded higher percentage statistics in residents who suffer from substance abuse, binge drinking, obesity, and smoking cigarettes. From these statistical findings, Worcester’s Division of Public Health has recognized two major areas of concern to focus on between 2011 and 2015. These priorities include unhealthy weight and substance abuse.

Our concern with the health status of the municipalities of the Central Massachusetts Regional Public Health Alliance (CMRPHA) was addressed in the form of a planning a Convergence CHIP Walk & Rally advocating and celebrating healthy living.

The goal of this project was to promote and publicize the Community Health Improvement Plan (CHIP) Walk, an event that is an outlet of knowledge expressing the advances of the Community Health Improvement Plan made yearly to reach the overarching goal to make the Greater Worcester Region the healthiest in New England by 2020. Participants of this walk benefit from healthy activity, highlighting the CHIP’s Domain Area 1: Healthy Eating and Active Living. Participants will experience an event shared with others on a common mission to live a healthier life.

“There are two valid reasons for this campaign: A health issue, which has become a national security issue. Seventy-five percent of military eligible kids going into the army can’t qualify for the physical because they are overweight or obese and can’t meet the minimum army standards. That’s serious. This is no longer a health issue, an economic issue, it’s becoming an issue of national security.”

- “Huckabee and Christie Defend First Lady’s Obesity Campaign against Right-Wing Attacks,” ThinkProgress

There is an obvious need for health education followed by action and continued progress. The CHIP Walk was coordinated in order to get the movement started in a way that rallied communities toward a common goal. With increasing support, the Greater Worcester region is on the rise toward becoming the healthiest region in New England by the year 2020. With help from public safety enforcements such as the fire department, police department, and EMS of each town, a walking route of Plan C: The Convergence Walk was geographically coordinated to start in each town of the Greater Worcester region and converge at the DCU Center in Worcester, Massachusetts.
Chapter 2: Background and Literature Review

Although the average American’s life expectancy has increased in past years, the general health of the population has not kept up pace with that of residents in other wealthy countries, according to The State of US Health (1990-2010) research study published in the Journal of American Medical Association. The lack of attention to healthy living within the country has developed due to factors such as lack of knowledge, minimal proper resources, inability to afford healthy foods, and much more. With no exception, the Greater Worcester area and in particular the City of Worcester also experiences these issues. In need of support, the City of Worcester’s Division of Public Health in partnership with over 90 community partners have committed to the long-term health and well-being of the lively and diverse community members of the Greater Worcester area. The need for public health awareness has become even more evident as Worcester has identified cardiovascular disease as “the leading cause of death for residents of Worcester County” (2012 Greater Worcester Region Community Health Assessment).

This chapter will present research findings indicating the Division of Public Health’s role in the health improvement process, as well as, the population demographic of the Greater Worcester area and their health needs. To fully understand the benefits of the walking event itself, research was also focused on possible improvements that may be used to treat obesity and improve the overall health of citizens. This chapter concludes with a review of walks and current large-scale events supporting causes within communities. This literature review suggests valuable logistical questions and planning tools necessary to successfully develop an event such as the CHIP Walk & Rally.

2.1 Community Health Improvement Plan

The Central MA Regional Public Health Alliance is a coalition of seven municipalities, including the towns of Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston, and the city of Worcester. Its mission is to improve, promote, and protect the health and safety of residents through the formation of strong community and academic partnerships, data-driven decision-making, and delivery of high quality public health services (Central MA Regional Public Health Alliance, 2015).

Our project sponsor, Dr. Michael Hirsh, was appointed Acting Commissioner of the Worcester Division of Public Health (DPH) and became the Medical Director in 2014. He is also currently the Surgeon-in-Chief, Professor of Surgery and Pediatrics, Chief of the Division of Pediatric Surgery and Trauma, and the Director of the Injury Free Worcester Program at the University of Massachusetts Medical Center. His active role in the development process of the DPH’s goals and services as led the agency to success.
Health improvements in the Greater Worcester region are crucial to the enhancement of residents’ quality of life, but also for supporting their future prosperity. To accomplish the previously stated goal, the Central MA Regional Public Health Alliance’s lead agency, the City of Worcester Division of Public Health, has partnered with concerned community members to lead a large scale community health planning effort.

The effort to enhance the health, quality of life, and the future social and economic well-being of the Greater Worcester region involves two major phases: (1) a Community Health Assessment (CHA) and (2) a Community Health Improvement Plan (CHIP). The 2012 Greater Worcester Region CHIP explains the importance of the CHA and the CHIP. The following is listed on page ii of the Report:

“The Community Health Improvement Planning process includes two major components:

1. A Community Health Assessment (CHA) to identify the health-related needs and strengths of the Greater Worcester region; and

2. A Community Health Improvement Plan (CHIP) to determine major health priorities, overarching goals, and specific objectives and strategies that can be implemented in a coordinated way across the region.”

The 2012 Greater Worcester Community Health Assessment was created from secondary social, economic, and epidemiological data as well as a community health survey of residents in the Greater Worcester region. Discussions with community residents and leaders were also utilized to gather health-related statistical data. Several themes including those around health issues such as overweight/obesity, substance abuse and mental health emerged through these gathered findings. From the comprehensive assessment, the CHIP is then drafted to determine the major health priorities, overarching goals, specific objectives, and strategies that can be implemented in a coordinated way across the region (CHIP Amendment and Annual Report I, 2013). Periodic CHA and CHIP meetings with influential and interested attendees, or stakeholders, from each town allow the city and its partners to identify health-related needs and strengths of the Worcester County, ultimately generating information for an annual CHIP report. Facilitated discussion groups address the information transfer of our citizens, specifically how to obtain information from residents and how to get information across to the communities. They seek to generate current and relevant information to publish, as well as expedite a commitment to the long-term health and well-being of the included communities.

The 2012 CHIP was developed using the key findings from the CHA to determine health priority areas. The CHIP includes five domain areas that identify major health priorities with an overarching goal and specific objectives necessary to achieve a healthy state. These domains outline specific yet attainable health objectives necessary to reach
the overarching goal of bringing Worcester and the surrounding region to its healthiest state by the year 2020.

The following identified priorities are referred to as “Domain Areas” to reflect their equal importance within the improvement process:

1. Healthy Eating/Active Living
2. Behavioral Health
3. Primary Care and Wellness
4. Violence and Injury Prevention
5. Health Equity and Health Disparities

Although each Domain Area focuses on a different health priority, according to Dr. Hirsh and the DPH, all are intertwined and interrelated with one another. It is also important to note that the CHIP and its five Domains focus strongly on the municipalities of the CMRPHA.

The launch of the 2015 Greater Worcester Region Community Health Assessment is scheduled to take place in October of 2015. Immediately after, the DPH will begin the development of the 2016 Community Health Improvement Plan which will be released to the public in the early months of 2016 in conjunction with an event of a CHIP Walk. To parallel the release of the CHIP Report, the CHIP Walk is scheduled to occur in May 2016. The walking event will act as the driving force behind the issuance of the CHIP Report as well as healthy living in general, as it encompasses the seven communities of Greater Worcester. The event will be followed by a Convergence Rally held at the DCU Center in Worcester allowing for educational activities and festivities for the community. The CHIP Walk will also serve as a unifying event for all participating communities toward one common goal; “becoming the healthiest you, in the healthiest city, in the healthiest region in New England by 2020” (Greater Worcester Community Health Improvement Plan 2014 Annual Report, 2014).

2.2 Population Demographic in the Greater Worcester Area

Understanding the populations of the communities involved in the Community Health Improvement Plan helped us to understand which type of people that would most likely participate in the CHIP Walk & Rally. Over the last 40 years, Worcester’s population has grown rapidly and become more diverse. Although many enjoy living within a city, the surrounding towns in the region also saw inflows as they appealed to residents who may yearn for a less hectic lifestyle. In the early twentieth century, Worcester became a manufacturing powerhouse and home to groups of people who descended from different ethnicities and heritages. Since then the region has grown as different types of ethnicities are starting to settle down. Therefore, evaluating the
population and diversity in Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston and Worcester, will be crucial to understand how many and what types of people may be participating in the CHIP Walk.

**Population.** The city of Worcester is recorded as the second largest city in Massachusetts and New England in population size. However, all other towns within the Greater Worcester area vary in size, population, and demographic. In 2010, the population of the City of Worcester was estimated to increase by 4.6 percent since 2000 resulting in 181,045 residents. The second-largest town community, Shrewsbury, experienced a population growth of 11.1% from 2000 to 2010 resulting to a population of 35,608. While Holden, the third-largest community also experienced a population growth of 9.9% resulting in a population of 17,346 residents (2012 Community Health Assessment, 2012, for all data in this section).

**Diversity.** In comparing the city of Worcester’s 2000 census to the 2010 census, a change in the demographic of Worcester can be observed. In 2000, Worcester reported a population of 172,648 people, which grew to 181,045 by the year 2010 (U.S. Census Bureau American Community Survey, 2013). This increase in population is roughly 5%, amounting to 8,397 individuals. However, the diversity break down of this population increase shows no increase in the amount of Caucasian (white) individuals. The population identified as Caucasian has actually decreased by 6% from 133,124 individuals in 2000 to 125,706 in 2010. However, Caucasians are still the dominant ethnic group in Worcester comprising 60% of the total population. The African American population has increased by 77% between 2000 and 2010, with populations of 11,892 and 21,056, respectively. The Asian population increased 31% in 2000 with 8,402 to a population of 11,034 in 2010. The Hispanic population experienced a growth of 45% from 2000 to 2010, rising from 26,155 to 37,818 individuals, respectively. Lastly, the “Other” population category increased by 22%; with 12,504 individuals in 2000 to 15,195 in 2010. The “Other” category includes those individuals that belong to two ethnic groups. The percentages for each ethnic group compared to the total population are as follows: Caucasian is 60.4%, African American is 11.5%, Asian is 6.1%, Hispanic or Latino is 21%, and “Other” is 8%, according to the 2012 Labor Force Characteristics by Race and Ethnicity (U.S. Census Bureau American Community Survey, 2013, for all of the data in this section).

The six cities other cities comprising the Greater Worcester area and involved in the CHIP Walk are Grafton, Holden, Leicester, Millbury, Shrewsbury, and West Boylston. The population breakdown for these communities is as follows. Beginning with the analysis of West Boylston, the total population recorded in 2010 was 7,699 individuals; which has grown 2.5% since the year 2000. In West Boylston, 4,246 men make up 55.4% of the population, and 3,423 women make up 44.6% of the population. The ethnicity of West Boylston is not very diverse, as Caucasians make up 90% of the population. The next largest ethnic group present is the Hispanic community, filling 5.3% of the population.
Reviewing the data analysis of Millbury, the total population in Millbury is 13,261 individuals; which has grown by 3.7% since 2000. Millbury has 6,383 men who is 48.1% of the population, and 6,878 women who is 51.9% of the population. Millbury was also found to lack ethnic diversity. Caucasians fill 93% of the population, while the next closest ethnic group is Hispanics with only 2.3% of the population.

Turning our attention to the city of Shrewsbury, the total population in Shrewsbury is 35,608 individuals; which has grown by 12.5% since 2000. In Shrewsbury, 17,365 men make up 48.8% of the population, and 18,243 women make up 51.2% of the population. The ethnic diversity of Shrewsbury also has a Caucasian population of 93%, with the next closest ethnic group being Hispanics with 2.3% of the population.

2.2 Health Concerns in the Greater Worcester Area

The 2012 Greater Worcester Community Health Assessment identified two lifestyle behaviors among residents in the Greater Worcester area that either promote or hinder health. These behaviors were healthy eating, physical activity, obesity and substance use and abuse.

Similar to patterns within the United States, all communities within the Greater Worcester area cited that obesity and behaviors associated with obesity, such as nutrition and physical activity, are important health concerns. In communities such as Worcester, the prevalence of overweight and obesity are often partnered with socioeconomic status. In 2012, 72% of adults with household incomes less than $25,000.00 reported that they were overweight and 33% reported that they were obese (MDPH, MassCHIP, BRFSS, 2010). Transportation, affordability of healthy food, access to resources, and concerns of neighborhood safety are all barriers to active, healthy living.

Substance abuse presents an immense problem to public health throughout the United States. Unfortunately, Worcester is not immune to the high levels of substance abuse that plague the country. Substance abuse, especially opioids, leads to unemployment, crime, bodily infection, destabilization of families, and death due to overdose (Health of Worcester, B. Dale McGee, 2012). In the 2015 CHA Assessment Meeting held on March 26th 2015, the problem of opioid and other addictions were brought to the attention of the group. The committee sought to identify the best and most ethical way to pose the question of opioid addiction to residents in the greater Worcester area. Whether the addiction is smoking, binge drinking, or drug abuse; room for improvement abounds in the Greater Worcester community.

Domain Area 2: Behavioral Health encompasses substance abuse and positive mental health. In Worcester, 18% of adults were classified as binge drinkers in 2012, which is slightly above the Massachusetts average (Health of Worcester, B. Dale McGee,
2012). As binge drinking is a gateway to alcoholism, it is a life threatening disease that must be addressed within the community.

In 2010, Worcester’s smoking rate stood at 19% among adults, 5 percent more than that of Massachusetts. Of that percentage within Worcester, two-thirds of smokers began before their eighteenth birthday, categorizing 66% of smokers in Worcester as long-time smokers. With long-term smoking comes the risk of life threatening diseases, including the two largest premature killers in Worcester: Cancer and Cardiovascular disease. Cancer ranks first as the largest premature killer in the city of Worcester, and of those cancer-related deaths, 40% stem from lung cancer. Long-term cigarette smoking most often causes lung cancer. This data proposes that if the smoking rate were to decrease, the premature death rate in the city of Worcester would potentially decrease as well.

Although all of the CHIP domains encompass health issues that are of major concern, Worcester's Division of Public Health has identified unhealthy living and inactive lifestyles as a priority to address among the surrounding communities. In this section we will discuss obesity, barriers to active, healthy living, and treating obesity.

**Obesity.** According to the Britannica Encyclopedia, obesity is defined as an increase in weight greater than 20% of an individual’s ideal body weight. Being overweight or obese can lead to many serious health problems in both children and adults. Preventable diseases, including Type 2 diabetes, certain cancers, heart attacks, and certain cancers, are linked to obesity directly (Boston Public Health Commission, 2014). Overweight and obesity ranges are determined using a person’s weight and height to calculate the Body Mass Index, commonly referred to as BMI (Health of Worcester, B. Dale McGee, 2012). Weight is measured in kilograms while height is measured in inches, therefore BMI correlates with the amount of body fat a person has. An adult with a BMI between the range of 25 and 29.9 is categorized as overweight. An adult with a BMI of 30 and higher is considered to be obese.

Obesity is an issue that is of extreme concern within the Worcester County region due to its association to diseases such as heart disease and diabetes. In 2012, 62% of Worcester's adult population was classified as overweight, with 27% of that population in the obese category (Health of Worcester, B. Dale McGee, 2012). Although the obesity rate improved to 27% from the 31% mark for the region back in 2009, Worcester’s obesity rate exceeds that of Massachusetts, which sits at 23.6%. The statistics for children in Worcester however, are extremely troubling, and portend an expensive and dangerous future. In the United States, the obesity rate of children entering grade school has doubled over the past three decades to 10%. In Worcester however, the obesity rate of children entering grade school surpasses 18%, which is 80% higher than the national rate. At age eight, obese children have a more than 90% chance of living with an unhealthy weight in adulthood. Once Worcester's children go to high school, the obesity rate increases to 20%. Among the lower class immigrants, who represent a large amount
of the Worcester population, the high school obesity rate exceeds the overall 20% mark (Health of Worcester, McGee).

While researching childhood obesity on the Centers for Disease Control and Prevention database, we came to the opinion that these statistics, left untreated and unacknowledged will lead to a concerning future for residential health. The increased inflow of lower class immigrants combined with the high childhood obesity rate in the region has been of growing concern with many health-conscious professionals. With unhealthy lifestyle and inactive living come medical health problems.

The following statistics and analysis have been taken from the City of Worcester’s Division of Public Health website:

According to the 2011 Behavior Risk Factor Surveillance System, 56.7% of adult Worcester residents participated in 150 minutes or more of physical activity per week compared to the state average of 56.3% and national average of 51.7%. These statistics is important due to the fact that “individuals who are active the recommended 150 minutes per week are less likely to be overweight or obese and less likely to suffer chronic disease” (Worcester Division of Public Health, 2015).

The 2011 System also stated that 24.3% of adult Worcester residents consumed fruits and vegetables five or more time per day which is lower than the state average of 26.2%. This statistic is crucial because individuals who eat the recommended five or more servings of fruit and vegetables per day are less likely to be overweight or obese and less likely to suffer chronic disease (Worcester Division of Public Health, 2015).

Lastly, 61.4% of Worcester residents were recorded to be overweight or obese which is above the state average of 58.9%. This statistic is viewed as a leading health indicator and specifically used to quantify the overall health of the communities (Worcester Division of Public Health, 2015).

From quantitative data, the 2012 CHA indicated that one of the leading causes of death in the Greater Worcester area is cardiovascular disease. Cardiovascular disease is a common result of plaque buildup in the artery walls that can inhibit blood flow and damage the inner layers of the coronary arteries. The leading causes of its development are unhealthy diet, lack of exercise, obesity, and smoking (National Heart, Lung, and Blood Institute, 2014). The amount of serious health problems that accompany obesity make decreasing Worcester’s obesity rate imperative.

2.3 Barriers to Active, Healthy Living

**Overall American Diet.** Obesity arises from a combination of health-related factors such as inactivity and unhealthy diet, though it is not limited to these. For years, the United States population has remained at the top in the mix of the most obese countries in the world. A major reason the United States’ position has remained constant relates to the type of food available within the United States. According to the Dietary
Guidelines Advisory Committee, about 117 million people have preventable chronic diseases related to poor diet and physical inactivity. With the increased frequency of American families eating out rather than cooking at home, we see an unhealthy trend. The choices offered are less than healthy when considering portion size and further cause you to desire large portions of high-fat, high-sodium, and high-calorie foods. Director of NIH’s National Heart, Lung, and Blood Institute, Dr. Elizabeth G. Nabel stated, “super-sized portions at restaurants have distorted what Americans consider a normal portion size, and that affects how much we eat at home as well.” Most food establishments that Americans visit have cooking methods in place that offer highly processed foods, breading, deep frying, and added salt flavor. These factors are compounded by the large portion sizes served at most restaurants. Food portions in America have grown in the last 20 years, a key contributor to the “potentially devastating increase in obesity among children and adults” (U.S. Department of Health and Human Services, 2013).

Low-Income Residents. Inactivity and unhealthy diets are prevalent in areas of the Greater Worcester region due to the amount of low-income and diverse residents. The 2015 Federal poverty guideline is defined as an annual income of $24,250.00 for a family of four. For larger families, it is an addition of $4,160 for each person. In a 2013 American Community Survey conducted within the Worcester County, 11.2% of residents were found to be living below the poverty level (U.S. Census Bureau American Community Survey, 2013). The Food Research and Action Center recognizes various key factors that support the idea that low-income and calorie-insecure people are more vulnerable to becoming overweight and suffering from obesity. These factors include limited resources, lack of access to healthy and affordable foods, fewer opportunities for physical activity, high levels of stress, greater exposure to marketing of obesity-promoting products, and limited access to health care (Food Research and Action Center, 2010).

It is also common for low-income neighborhoods to lack full-service grocery stores and farmers’ markets where higher-income residents have the opportunity to buy varieties of fruits, vegetables, whole grains, and low-fat dairy products. With limited resources such as lack of transportation, it is much more convenient for residents to purchase food within their proximity regardless of how innutritious the item may be. A comprehensive review of U.S. studies examining neighborhood hardships in food access found that residents with better access to supermarkets tend to have healthier diets and reduced risk of obesity (Larson et al, 2009).

Another pressing factor preventing low-income communities from combating obesity is the greater availability of fast food restaurants (Larson et al, 2009). Popular fast food chains, such as Burger King, McDonalds, and Taco Bell, serve nutrient-poor foods at relatively low prices appealing to these local low-income residents. Fast foods are highly processed and full of fat, calories, and sodium. Frequently choosing a fast
food meal can lead to increased buildup of calories, which in turn leads to the possibility of weight gain and obesity (Muntel, RD, 2015).

**Nature vs. Nurture.** Between the years 1980 and 2010, the population in Worcester has seen large amounts of growth and is seemingly becoming more diverse. Mainly Hispanics, African Americans, and Asians have increased the most in size out of the ethnic groups present in Worcester. These inflows into Worcester have brought in many different cultural practices and habits with regard to public health. The combination of “nature” and “nurture” is where we turn to in order to understand the relationship between cultural background and health. Both ethnicity and ancestry play key roles in assessing one’s health. Ethnicity refers to one’s customs and lifestyle choices, while ancestry regards one’s genetics and takes into account previous health disparities. We can look at ancestry as the “nature” side and ethnicity as the “nurture” side.

The Institute of Medicine (IOM) report regarded unequal treatment with evidence that “racial and ethnic minorities tend to receive lower quality of care than non-minorities.” Though there are significant advances in the diagnosis and treatment of most health issues to date, there is evidence that different ancestral backgrounds hold a higher likelihood to catch a certain disease or sickness than others. On the nature side for example, Caucasians are more susceptible to cystic fibrosis while African Americans are more likely to inherit cardiovascular disease. Though genetic predisposition is not a guarantee that one will develop a disease, the risk is indeed higher. On the nurture side, ethnicity encompasses one’s lifestyle choices. Positive customs of life include the routine of taking a walk after family dinner, or eating a diet high in fruits and vegetables, whereas some ethnicities practice unhealthy customs such as higher rates of smoking and diets high in carbohydrates. Many ethnic groups suffer by absorbing “traditional American eating habits.” As nature and nurture are both equally important when it comes to overall health, the new groups that migrated to Worcester in the 1900’s may have brought a higher genetic risk with them. Fortunately, more consciously aware lifestyle choices can eliminate unhealthy habits.

**2.4 Improving Health and Treating Obesity**

The most important step of many obesity treatment and weight-loss programs is goal setting. Those who are categorized as obese or overweight and wish to change their lifestyle must create a weight loss program that works best for them. According to Stanford Health Care, there are five common methods for treating obesity that include diet, exercise, environmental changes, non-surgical treatment, and surgical treatment. Worcester’s Division of Public Health has focused on the methods of diet and exercise for treating obesity within the Greater Worcester area. In particular, the CHIP established key objectives for Domain Area 1: Healthy Eating and Active Living which
include increasing the availability of affordable fresh and local fruits, implementing improvements for physical activity opportunities, and implementing an obesity prevention/reduction initiative. The creation of the CHIP Walk & Rally provides a community and family-oriented event that promotes physical activity and an opportunity to educate the residents of the towns within the CMRPHA.

**Healthy Eating.** Creating a diet that will assist in weight loss but also refrain from long-term health problems is a difficult task. The most successful long-term weight loss programs rely on limiting how many calories the individual consumes and how many are burned through exercise or daily activity (Stanford Health Care, 2015). Healthy and effective diets include a variety of foods such as polyunsaturated and monounsaturated fats. Effective diets also include grains such as brown rice and whole wheat bread rather than white. These whole grain foods provide more nutrients and fiber, which causes the body to absorb them more slowly. This results in an absence of rapid spike in insulin that usually triggers hunger and cravings. It is also encouraged that people to consume at least five servings daily of a variety of fruits and vegetables (Stanford Health Care, 2015).

In conclusion, the Dietary Guidelines for Americans, 2010, emphasizes three major goals for Americans when trying to properly diet. The following Dietary Guidelines, taken from the updated version of April 2015, show that diet and activity influence weight:

- Balance calories with physical activity to manage weight
- Consume more of certain foods and nutrients such as fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood
- Consume fewer foods with sodium (salt), saturated fats, trans fats, cholesterol, added sugars, and refined grains

**Active Living.** Exercise is one of the most beneficial methods for treating obesity due to its ability to keep and add lean muscle tissue while losing fat. Increasing physical activity has beneficial effects on heart diseases or strokes (Fentem, 1994). Combining this method with diet increases the effectiveness of a weight loss program. It promotes emotional well-being, reduces appetite, improves sleep, and lowers bad cholesterol (Stanford Health Care, 2015). Exercise also includes many benefits such as burning off calories, maintaining muscle tone, increasing your metabolic rate, improving circulation, reducing depression, increasing your ability to concentrate, and suppressing your appetite (Wayne State University Physician Group, 2011). Maintaining an exercise program is a difficult task however following guidelines may promote successful results. Some guidelines include finding a friend to exercise with, avoiding competitiveness and trying to improve on your last effort instead of comparing yourself with someone else,
recovering completely from illness before resuming exercise, and remembering to have fun and enjoy getting healthy (Wayne State University Physician Group, 2011).

**Walking.** Performing physical activities such as walking will burn calories and increase stamina, energy level and bone strength (Marina, 2013). Since it is extremely difficult to begin exercising, physicians often suggest those suffering from obesity partake in walking programs. Once a walking pace is established, the individual is encouraged to walk five days per week and add two minutes of brisk walking time each week. The first week should include walking for five minutes. By week 12, the individual will be walking 30 minutes, five days per week for a total of 150 minutes each week (Marina, 2013). According to the Centers for Disease Control, this is the amount of time recommended for moderate aerobic activity of adults.

### 2.5 Walks

Walks that generate awareness for an important communal cause have proven to be successful in raising support and inspiring action. According to Nonprofit Charitable Orgs Expert, Joanne Fritz, walks are a way to involve many more people in an organization's cause. Specifically, they are an effective way to engage the public and spread knowledge about a particular issue. Walkathons, or sponsored walks, are commonly associated with being fundraisers for common diseases, conditions or issues that affect large numbers of people within the population. Event participation is often promoted as a symbol of empowerment, remembrance, or awareness of sufferers and their relations (Lexbook Dictionary, 2015). Planning a walk takes a lot of preparation, strategy, and knowledge therefore we have consulted literature pertaining to walking events. Our research has revealed different types of walking lengths, organizational strategies, ideas pertaining to event logistics, and ways to engage the public to participate in our event. Previous events suggest shorter walks are ideal for participants and strive to unite communities towards common goals. In this section, we will discuss five organizations that organize walks, or fundraising walkathons, that effectively cultivate support and get information to the public.

#### 2.5.1 CMHA Walk+Run for the Homeless

The Central Massachusetts Housing Alliance, Inc. works each year to organize the Walk+Run for the Homeless, a 5k event that begins and ends at Elm Park in Worcester, MA. This event is pioneered in part by Ann Gibbons-Smith, CMHA Assistant Executive Director, along with other key CMHA members and an outside community effort.

Homelessness is a major problem, especially in the Worcester community, where family homelessness increased 22% in the last year. 187 families in shelters, and 40 families in motels compile the extent of homelessness in Worcester. The CMHA aims to
prevent homelessness first, rather than shelter those who have nowhere to go. As the average age of the homeless in the Worcester area is eight years old, this is an obvious area of concern that is successfully addressed in the form of an event. The 30th Annual Walk+Run for the Homeless is scheduled to take place on May 17, 2016, similar to the potential date of the CHIP Walk & Rally. Due to the major similarities between the two events, Ann Gibbons-Smith was able to offer us helpful insight into the process of planning a walking event. Described further in Chapter 4: Findings, one key takeaway from the meeting involved the aspect of police detail. During the day of the Walk+Run for the Homeless, police are utilized to corral and ensure the safety of participants, however the EMS and fire department are not needed on site.

2.5.2. Walk to End Alzheimer’s Worcester County Walk

The Alzheimer’s Association Walk to End Alzheimer’s is the nation’s largest event to raise awareness and funds for Alzheimer care, support and research (Alzheimer’s Association, 2015). Formerly known as the Memory Walk, this event is held year-round in all 50 states. The walk aims to unite the entire community “in a display of combined strength and dedication in the fight against this devastating disease” (Alzheimer’s Association, 2015). The event is free to the public, however each participant is encouraged to fundraise in order to contribute to the cause and raise awareness. Worcester County has supported their own 3-mile Walk to End Alzheimer’s located in Worcester, MA. It is scheduled to occur on Sunday, October 4th, 2015 at Quinsigamond Community College with registration beginning at 8am, ceremony at 9am, and walk beginning at 9:30am. This specific walk’s details are linked on the official Walk to End Alzheimer’s website and provide walkers with key event information such as location, time, length of walk, general information, and event specifics. Walkers are also encouraged to participate in the event planning and volunteer at the walking event.

2.5.3 AVON Walk for Breast Cancer

AVON 39 Walk for Breast Cancer are challenging and exciting events held in Houston, Washington DC, Boston, Chicago, San Francisco, Santa Barbara, and New York. During these large events, participants are encourage to walk 39 miles in two days to raise awareness and fight against breast cancer. As an organization, AVON 39 “helps fund research, awareness, and education while providing assistance for families currently battling breast cancer.” Since 2003, AVON 39 has raised $550,000,000.00 and participants have walked 6,868,000 miles (AVON 39, 2015). Participants can make a choice of walking a marathon (26.2 miles) or a marathon and a half (39.3 miles) over the weekend. Walking the full event marathon and a half means participants walk 26.2 miles on Saturday and 13.1 miles on Sunday. During the event, full support is provided including marked trails, stops every 1.5-3 miles for water, sports drinks, snacks, lunch, and first aid care. One interesting finding of this walk was that sweep vans patrol the
route looking for walkers who need assistance. In this way, event participants are kept safe and are not lost along the route. During this two-day event, the first day ends at Basecamp 39 where hot showers and a hot meal are provided. Each walker is encouraged to provide his/her own sleeping bag however; they are assigned to two-person tents. At this base, AVON 39 hopes to provide participants with an experience and chance to bond with other participants who are striving to accomplish the same goal: defeating breast cancer. Participants are also given a list of “cheering stations” so family and friends have the ability to cheer and show support in safe and convenient locations along the route. This event does not allow pets along the walk due to safety concerns and lack of accommodations for pets (AVON 39, 2015).

2.5.4 Organization: March of Dimes

The first charitable walking event in the United States took place in San Antonio, Texas on October 7th, 1970. This walk was organized for March of Dimes, formerly known as WalkAmerica, to raise awareness and fund research to prevent premature births, birth defects, and infant mortality (March of Dimes, 2014). Since the first walk, March of Dimes has grown to be an influential organization that has raised an incredible $2.3 billion dollars to benefit all babies (March of Dimes, 2014). Also referred to as March of Babies, this event takes place all over the United States with very similar event schedules. The event often includes an opening ceremony and walk/fun run. In 2012, High Point University held their own March for Babies for the local community. The event began with a registration at 9:00am and opening ceremony immediately following at 9:30am. The March for Babies Walk and Fun Run started promptly at 10:00am. The walk route was approximately 3 miles and stated within the event facts sheet that water stops would be along the way to provide walkers with snacks and an opportunity to rehydrate. For this specific event, walkers were also given fundraising incentives beginning with a t-shirt reward for raising $200 and continually increasing with the amount of money raised. This tactic encourages walkers to fund for the event, as well as, the cause itself. Within the High Point March for Babies Fact Sheet, most frequently questions were answered to provide walkers and participants with accurate information regarding any unanswered problems. Within this list walkers were encouraged to leave bikes and skateboards behind, leash any dog that may be accompanying a walker, suggested parking locations, and informed walkers that breakfast food will be provided at registration. Lastly, walkers are informed that the event will happen rain or shine with the only exception to this rule being the occurrence of unsafe weather conditions.

2.5.5 Organization: Walk from Obesity

The Walk from Obesity is an event that occurs in cities across the United States that encourages individuals affected by obesity along with family and friends of those affected to come together and proudly walk to raise awareness. In particular, past
participants have included those who have successfully treated their obesity, those who continually struggle with obesity, and members of the public who are interested in advancing the cause of fighting obesity (Walk from Obesity, 2014). As a fundraising event, Walk from Obesity has been extremely successful and to date has raised over $6 million to support research and educational programs on behalf of those affected this issue. On June 13, 2015 there is a scheduled Walk from Obesity set to take place at Brigham and Women’s Faulkner Hospital in Boston, MA. For this particular event, participants are able to sign up only for $25.00 until the event date and will be charged $35.00 for signing up the day of the walk. However, children under twelve are free with a paid adult. This pricing strategy encourages participants to sign up in a timely manner and allowing children to participant free of charge encourages families to participant. All participants are given an official Walk from Obesity t-shirt as well as an optional yet free one-year membership to the Obesity Action Coalition (Walk from Obesity, 2015). During this event teams are encouraged to be formed while registering online and must set a team fundraising goal. This provides a sense of unity and pushes participants to reach their goal.

### 2.5.6 Organization: JDRF One Walk

The Juvenile Diabetes Research Foundation, more commonly referred to as JDRF, is a major charitable organization whose aim is to provide funding research on Type 1 Diabetes. With this research ability, supporters hope to remove the impact of Type 1 Diabetes from people’s lives and ultimately achieve a world without where it no longer exists. These 5K JDRF Walks began in 1992 and have achieved more than 800,000 participants each year (JDRF, 2014). These participants include those suffering from Type 1 Diabetes, as well as friends, family, or coworkers of someone challenged by this disease. This organization has been sponsored by elite partners such as Ford, Marshalls, and Walgreens to spread their mission while effectively raising awareness for this disease and promoting each JDRF walk to its full potential. Local JDRF One Walk’s have created Facebook events to publicize the event’s location and date to potential participants. While researching this walk, many articles from local news outlets emerged. Reaching out to local outlets is a great way to spread knowledge and allow for mass publication within the community.

### 2.6 Rallies and Large Scale Events

According to Oxford Dictionaries, rallies are defined as “a mass meeting of people making a political protest or showing support for a cause.” Rallies have the potential to be small and focus on a singular issue but also have the ability to be much more involved and include a full program of speakers, participants, and partner organizations (Rally Organizing Guide, 2014). Researching the strategic planning behind completed rallies will allow for successful development of the CHIP Walk Rally. Our research has revealed
that engaging activities provide a fun way for the community to unite and celebrate a common cause. In this section, we will discuss basic rally strategies and various organizations that have held large scale events supporting a cause.

2.6.1 Rally Strategies
A rally’s main purpose is to bring together a large amount of people who share the same common goal or support a particular issue. They also “educate, stimulate further action, raise money, energize supporters, serve notice on the opposition, and help build coalitions” (Hedemann, 2014). Rallies have the potential to run into many problems such as bad weather, lower number or participants, finance, and length of time. It is important to take into consideration all potential problems and try to avoid them as much as possible (Hedemann, 2014). See Appendix D: Rally Ideas for a list of valuable logistics and questions pertaining to rally event planning and specific ideas pertaining to health.

2.6.2 Take Back the Night Event
Take Back the Night has become an annual event in many communities and on college campuses around the globe. The event aims to raise awareness of the issue of violence against women, which encompasses domestic violence and child abuse to rape and sexual assault (Bond, 2012). This event often includes a rally, music, speakers, a march through the community and much more (Bucknell Take Back the Night Rally, 2014). The first “Take Back the Night” event was held in 1977 and consisted of a reading by Anne Pride at an anti-violence rally in Pittsburgh. Worcester Polytechnic Institute is among one of the hundreds of colleges throughout the nation that holds a “Take Back the Night” event. WPI’s event consists of mostly speakers and several musical performers in between. The speaker’s influential stories help drive home the message of event and provides motivation for attendees to actively fight against violence against women. This event displays excellent strategies of engagement that may be valuable to the development of the CHIP Walk Rally.

2.6.3 Relay for Life Event
Relay for Life is a fundraising walk event for the American Cancer Society. The purposes of the event are to celebrate the lives of survivors who have won the battle against cancer, to remember those we’ve lost to cancer, and to fight back in the hope that one day we will find a cure (American Cancer Society-Relay for Life, 2015). Relay for Life participants are organized by teams and camp out overnight at the event location. The event is often held around a walking track and each member of the team takes turns walking around the event “track.” Food, games, and activities provide entertainment throughout the night and present a family-friendly environment for the entire
community. Such activities include speakers, comedians, dancers, musicians, yoga, sports tournaments, hypnotists, and much more. Obtaining active and entertaining acts is key to keeping participants engage throughout the entire event (American Cancer Society-Relay for Life, 2015).

2.6.4 New England VegFest

The New England VegFest advertises itself as a “free festival that brings the local community together to celebrate vegetarianism: an animal-friendly, environmentally sustainable, and healthy lifestyle.” The festival originally began in 2010 as the Worcester VegFest but had grown over the past five years and now encompasses all of New England. Over the past five years VegFest has also recorded an increase of attendees; 2,000 attendees in 2011, 3,000 attendees in 2012, 5,000 attendees in 2013, and 7,000 attendees in 2014 (New England VegFest, 2015). The event occurs at the DCU Center located at 50 Foster St, Worcester, MA.

New England VegFest has developed a creative, colorful, and user-friendly website that provides potential participants or sponsors with information such as the location, event history and statistics, sponsorship opportunities, and the event schedule. New England VegFest is organized by volunteers and therefore encourages both sponsors and exhibitors to participate by extending varying levels of commitment at the event. Sponsors are provided with different levels including gold, silver, and bronze. The lowest level, bronze, includes a thank you in the program and on Website, a free table at VegFest with Electricity and Tables/Chairs, and a premium table placement at the event. The silver level includes all bronze benefits plus, special mention during the event, a social media thank you via Facebook and twitter, a logo in the sponsor section of the event program, a free table at VegFest with extras/volunteering staffing, a premium table placement at the event, drop-ship merchandise to venue, and ½ page ad in the program. The gold sponsorship level includes all bronze and silver benefits plus, an inside or back cover ad on event program, a social media promotion campaign via Facebook and Twitter, a logo on all VegFest promotional materials (posters, flyers, print ads, etc.), and VegFest will distribute branded materials along with program. Similarly, the exhibitor section also includes three options, standard exhibitor space, exhibitor space with electricity, and non-profit exhibitor space. The non-profit exhibitor space is for federally recognized 501c3 organizations, and animal-rights groups. The exhibitor space with electricity is for any business, restaurant, or organization that requires access to electricity. Lastly, the standard exhibitor space is provided for any business, restaurant, or organization. The NE VegFest website also gives tentative schedule of presentations occurring on 3rd Floor, Meeting Room E and activities occurring on Main Event Hall. The presentations include speakers while the activities include types of yoga, children’s book reading, and a small vegetable circus.
Chapter 3: Methodology

The overarching goal of this project was to gain support within the communities to improve the overall health of the greater Worcester area. With the current health conditions of the seven communities combined with the misconception that an inactive lifestyle is acceptable, we organized the CHIP Walk to combat obesity and garner public support and awareness about the risks related to poor health. We identified the contact information of public safety departments of Holden, Grafton, Leicester, Millbury, Shrewsbury, West Boylston, and Worcester. These contacts are essential due to the fact that police detail will ensure safety throughout the event. The Community Health Improvement Plan (CHIP) has attracted eager followers in recent years; however further promotion will advocate its continued success to all surrounding residents in the regions. The following is a list of objectives we aim to achieve in accomplishing our goal:

1. Understand the CHIP and DPH goals and services.
2. Assess the feasibility of the CHIP Walk & Rally as a whole.
3. Geo-map various CHIP Walk route plans that will allow for the easiest pedestrian transportation.
4. Identify key locations, local business, and potential community partners along each route.
5. Identify public safety departments and event permits.
6. Determine methods of promotion to garner support and awareness.
7. Preliminary development of the CHIP Walk Rally.

The following section is organized by a set of project objectives that enabled us to accomplishing our goal. It will describe how we ultimately promoted and publicized the CHIP Walk & Rally by breaking down the research, processes, organization, and coordination necessary to achieve our goal.
3.1 Objective 1
Understand the CHIP and DPH goal and services.

To successfully understand the CHIP’s and DPH’s goals and services, extensive research of past and present health-related publications were assessed. From this information we have gathered that the DPH primary focus is to ensure the safety of all residents within the community. According to the City of Worcester Division of Public Health’s website, the agency works to protect and improve the community’s well-being through investigation of health problems, preparing for and responding to public emergencies, the development of policies that improve health, and linking people to health services. As previously mentioned, the DPH has partnered with UMass Memorial Medical Center, Common Pathways, and over 90 other community partners to create the Community Health Improvement Plan (CHIP). The plan’s overall goal is to improve the quality of life and prosperity of the residents of the Greater Worcester area. Although each Domain Area within this plan is considered of equal importance, the CHIP Walk & Rally relates closely to Domain Area 1: Healthy Eating/Active Living. Domain 1’s goal is “to create an environment and community that support people’s ability to make healthy eating and active living choices that promote health and well-being” (2012 Greater Worcester Region Community Health Improvement Plan, 2012). Out of the five domain areas, this domain relates the most to the CHIP Walk due to its ability to provide an outlet for physical activity. Therefore, it was critical for our team to understand what it means to be unhealthy and inactive to comprehend why this issue is of importance to the DPH and its affiliates.

3.2 Objective 2
Assess the feasibility of the CHIP Walk & Rally as a whole.

According to The Walkathon Guide written by Lee Garverick, a walkathon requires great efforts in regard to organization and planning. A dedicated team along with a great amount of community participation is needed in order to properly get the job done. If the event planners, community sponsors, and participants do not all share a common vision of healthy eating and active living, the walk is not likely to be effective.

In aiming to organize a walk with a requested length of roughly twenty miles, it was necessary to assess the feasibility of traversing through seven towns. To accurately assess the degree to which a walk could be conveniently held in the Greater Worcester region, we used Google Maps. We also met with Dr. Michael P. Hirsh of Worcester’s Division of Public Health along with Dr. Waldo Zamor of UMass Medical to understand the tangible cause at hand, which is indeed to gain support to improve the overall health of the surrounding region. The following are a set of research questions we created to obtain information on the preliminary feasibility of the CHIP Walk & Rally as a whole:
- Is the CHIP Walk to be done 20 miles with 1 route?
- Can the CHIP Walk be broken up into several segments or legs?
- Do you anticipate the walk to be done in 1 day throughout the 7 towns?
- What is the potential date?
- Where is there availability for parking?
- What will the participants get out of this walk?
- Do you have a list of contacts you can assist us with?
- Is the event concerned solely with Domain One, or all 5 domains?
- Do you anticipate a follow up project or event?
- What will be the estimated budget for the event?
- Can we fundraise or accept donations?
- Will there be giveaways or prizes?

CHIP Walk

After receiving much background information on the formation of the CHIP, the idea of total inclusion became an important aspect to focus on. We were advised that each town and city in the Greater Worcester region should be included, therefore when developing route plans, we aimed to incorporate mileage in the towns of Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston, and the city of Worcester.

3.3 Objective 3

Geo-map various CHIP Walk routes.

One of the greater challenges of planning the CHIP Walk was geo-mapping the route itself. The DPH originally requested that the walk traverse through each of the seven towns within the CMRPHA, including Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston, and Worcester. Dr. Hirsh stressed the importance of a unifying event encompassing as many towns as possible that would propel the region toward a common goal.

In our research, we found that the AVON Walk for Breast Cancer consisted of a two-day event where participants are encouraged to walk 39.3 miles in a fight against breast cancer (Section 2.5.3). Dedicating to this event in full would require participants to walk 26.2 miles on Saturday and 13.1 miles on Sunday. Using our preliminary research, we identified roughly 7.5 miles as a reasonable yet meaningful length for a walk.

In our first attempt at geo-mapping the CHIP Walk, we devised one route that traversed through all seven communities in a continuous loop. This was accomplished via the use of Google Maps. The total square mileage of the six towns and the city of
Worcester was calculated to be 54 square miles, and traversed by countless back roads, state roads, major routes, highways and intersections.

We aimed to encompass each town’s main attractions and accessible roads to help plan the following routes.

**Plan A: 20 mile Routes**

During the first meeting with Dr. Hirsh, we were informed that a 20 mile CHIP Walk was preferred over the 50 mile route due to the fact that this would be a one day event. Through Google Maps, we developed a plan of three routes with lengths of approximately 20 miles each that traversed through two, three, or four of the seven towns involved. With a main concern for safety, we tried to avoid crossing major roads like Route 9 and 20, albeit unsuccessful. We constructed each route through the center of the towns involved due to the lesser amounts of traffic on the town’s main street.

**Plan B: Community Routes**

Due to the fallbacks and negatives of Plan A, we went back to the drawing board to assess the possibility of a different set of routes. Through the use of Google Maps, we developed an alternate plan of routes that would include as many of the towns in the region as possible. We also looked to shorten the routes, and in doing so devised Plan B that encompasses 7 smaller routes, one per town, with each being 3-3.5 miles in length. By using the USA Track Mapper, each route was remapped online. Through the USA Track mapper software, we were able to allow the route to form a loop. Having the walk begin and end at the same location would enable participants to park and walk from and to their cars with ease.

See Appendix B2 for a visual representation of the community routes.

**Plan C: The Convergence Walk**

The last set of routes compiled together was Plan C: The Convergence Walk. This plan has seven routes beginning in the towns of Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston and Worcester, and converges at a common finish line in the heart of Worcester. Through Google Maps Street View, we were able to pin point locations with large enough parking for an event of this magnitude. Again, with the use of “street view” we were also able to identify obvious high traffic areas that would not allow for a walking event.

Further, each route of the convergence walk was driven to assess the current conditions of each road and decipher if each would allow for pedestrian transportation.
As the findings will reveal, Plan C encompasses seven community routes that converge for a rally at the DCU Center in Worcester. This plan was chosen as the most logistically feasible routes. See Appendix B3 for a visual representation of the convergence routes.

3.4 Objective 4

**Identify key locations, local business, and potential community partners along each route.**

The next step of our project was to identify potential community partners to support or sponsor the CHIP Walk & Rally. Local businesses and colleges will have the opportunity to set up healthy and educational booths showcasing their individual expertise in current health issues. They can offer information, relevant advertisements, or simply a table of water to show community support. After driving each route, we formulated a list of all health related businesses that have the potential for partnerships or to support the goals of the CHIP. Next, we compared this list to those businesses list on Google Maps. From both of these resources we have compiled a full listing list of local businesses, phone numbers and mailing addresses, listed in alphabetical order by route located in Appendix A1.

Previous affiliates of the DPH, such as the UMass Memorial Children’s Medical Center, Common Pathways, and Fallon Health were then identified by acknowledgment.
on the 2012 Greater Worcester Area Community Health Improvement Plan. Key departments and personnel that have been, or could be, of help are listed along with a contact phone number, email address, and location. A full contact listing is available in Appendix A2: Key Partners.

Next, all public elementary, middle, and high schools located in the Greater Worcester region were identified through Google Maps. Appendix A3 lists each school in alphabetical order by town, and offers a phone number to contact each office. Local schools have the potential to encourage students and their families to participate in the event and perhaps even volunteer. Located in Appendix A4 is each college or university in the Greater Worcester area, listed in alphabetical order by school. The colleges included in the listing are Anna Maria College, Assumption College, Becker College, Clark University, College of the Holy Cross, Fitchburg State University, Quinsigamond Community College, Worcester Polytechnic Institute, and Worcester State University. Available for each entry are also key departments, personnel, phone numbers, email addresses and locations. In gaining support from universities, college students will be made aware of the event and be encouraged to participate.

Recruiting community partners and sponsors is essential to the success of the CHIP Walk & Rally. A full contact list including local businesses, DPH affiliates, Greater Worcester area public schools, and student activities offices of each surrounding college is provided in Appendix A.

3.5 Objective 5
Identify public safety departments and event permits.

After geo-mapping each route, it was important to identify the public safety departments of participating town such as the EMS, police department, and fire department. Coordinating with the public safety departments is essential to maintaining a safe and family-oriented event. Contact information for each public safety department was obtained from their official town webpage.

The Worcester Special Events office was contacted in the beginning stages of the project to assess the types of permits needed for a large group of participants to safely walk along roads within each town. Within Worcester, a Special Event Permit Application will need to be completed, as well as a Parade Permit that can be obtained by contacting the police department. A temporary food permit must also be obtained due to the possibility of selling and giving away food at the CHIP Walk & Rally.

Appendix A5: Public Safety is listed in alphabetical order by town and contains the full listing of public safety departments, key personnel, and contact phone and fax numbers.
3.6 Objective 6

Determine methods of promotion to garner support and awareness.

To develop recommendations to launch this event, we needed to outline potential methods of promotion. In order to introduce the CHIP Walk & Rally to the community and various surrounding organizations, we developed a number of ways to advertise the event through the distribution of flyers and posters, and the creation of a website.

Flyer. Preliminary flyers were developed through a Microsoft Word template that included the date and location of the event, as well as an overview of the CHIP Walk & Rally. The flyers, created with promotional taglines enticing readers to participate, are to be distributed among the businesses, local schools and colleges in the Greater Worcester region. See Appendix E for sample promotional flyers.

Poster. Posters similar to the flyers will be created and used garner awareness for the event. Explained further in Chapter 5: Recommendations, these posters will be readable and visually appealing to recruit participants.

Website. A preliminary website was developed using Wix.com. An event website provides potential participants with background information necessary to attend the event. The preliminary CHIP Walk & Rally website includes event details, walking routes, the event schedule, contact information, and social media links. It provides a convenient hub of information that may also encourage more people to become involved. See Appendix E for more images of sample website.

Social Media. Social media is a free and open platform that allows for the sharing of information and promotional advertising, and enables users to “favorite,” “retweet,” or “like” posts that an individual sends out to the Internet. The use of social media is crucial in our advertising strategy, as this type of promotion would be done with no work on our end. The CHIP Walk Website was created to have the ability to host links to social media, including Twitter and Facebook. Facebook provides an easy avenue for those interested in the event to share the details and logistics with their friends. In using various forms of social media, the message of the CHIP Walk & Rally will be spread beyond the borders of the Greater Worcester region. The Worcester Division of Public Health’s official twitter will promote the event, offering information on the date and time, and the primary vision of the CHIP.

3.7 Objective 7

Preliminary development of the CHIP Rally.

The final step of our project was to start the preliminary development of the CHIP Rally. After developing the convergence route, the idea of having a finale celebration began to emerge. The initial problem presented was the ability to find a
suitable venue that will properly hold a large amount of people, as well as, allow fun and engaging activities for participants.

The next step within the preliminary development was to begin brainstorming specific events, activities, and speakers that could take place at the event. Our goal is to provide participants with an educational yet fun rally therefore focus was set on choosing only health-related activities.
Chapter 4: Findings and Analysis

After assessing the feasibility of a multiple-community event and analyzing the information obtained on the surrounding roadways and traffic flows of the seven participating towns, we generated various findings concerning the development of the CHIP Walk & Rally. The following progression of findings shows specifically how we arrived at Plan C: The Convergence Walk.

Finding 1
The DPH is deeply commitment to the CHIP and its continued role within the Greater Worcester area.

The City of Worcester Division of Public Health and the Central MA Regional Public Health Alliance develop a revised Community Health Assessment released annually, which strives to evaluate how the health of the region has changed each year since the 2012 start date. Following the completion of each CHA report, the DPH initiates a Community Health Improvement Planning process that will focus on sustaining all achievements made throughout the community due to the implementation of the CHIP. Most importantly, new methods and approaches to support the CHIP’s vision of being the healthiest city and region by the year 2020 are also identified and implemented (2014 Greater Worcester Community Health Improvement Plan 2014 Annual Report). CHIP implantation has begun to have an impact of the health status of Worcester. Its information provides factual evidence of the problems prevalent within the Greater Worcester area.

We have found that the development of the CHA is an extensive process that begins at the start of the year in focus and is released in the form of a report in October of that same year. Following this process, the CHIP is then created for release in the spring of the following year.

On March 26th 2015, the City of Worcester Division of Public Health held a stakeholders community meeting at the Family Health Center of Worcester to develop the 2015 Greater Worcester Region Community Health Assessment. Attendees at this meeting were educated briefly on the process of creating the Community Health Assessment (CHA) and were encouraged to participate in open group discussions. The discussions focused on issues surrounding surveying questionnaires and proper outreach techniques to the residents of the Greater Worcester region. Our group had the pleasure of attending and partaking in these discussions and observed the “behind the scenes” process needed to assemble the health surveys from which the CHA is developed.
Finding 2
A CHIP Walk of approximately 20 miles in length was deemed infeasible.

At the initial start of our project, the project description informed us that our sponsors would like a 20 mile walk that traversed through each of the seven communities involved in the Greater Worcester Region and CHIP. After preliminary geo-mapping a route that traversed all seven towns, we ended up with a route that was approximately 54 miles in length, much longer than the requested length and highly infeasible. Therefore, we went back to the drawing board and met with our sponsor, Dr. Michael Hirsh to discuss further options.

We were informed that a shorter walk that traversed some of the communities was more preferred than a seemingly impossible loop around each town. As a result, we created three routes that were roughly 20 miles in length and traversed anywhere from two to four communities.

The first route devised (Possible Route 1) incorporated the communities of Worcester, Millbury, Grafton and Shrewsbury. It begins and ends at the College of the Holy Cross in Worcester, and first crosses the northern parts of Millbury and Grafton before heading north into Shrewsbury. From there, the route turns west and heads back into Worcester toward Holy Cross. The upsides of Route 1 include the length of 20 miles, the passing of UMass Medical along the route, and the inclusion of four towns in the event. The negatives include the aspect of a congested walk, as this route crosses the very busy Route 9 twice and goes through some of the more crowded areas in Worcester.

The second route (Possible Route 2) was mapped to incorporate the communities of Worcester, West Boylston and Holden. It begins and ends at Elm Park in Worcester, and first traverses West Boylston before heading west to Holden and then turning south back into Worcester. One upside of Route 2 includes its level of safety, since no major roads were crossed. The downsides are that the route was slightly over 20 miles, and did not include as many communities as Possible Route 1.

The last devised route (Possible Route 3) incorporates the communities of Worcester and Leicester. This route begins and ends at Newton Hill in Worcester. The upsides of Route 3 include its level of safety similar to that of Route 2, as well as the landmarks it passes including the Worcester Airport, Worcester Art Museum, WPI, and Institute Park. The downsides to Route 3 include the shorter length of 16 miles and its inclusion of only two towns of Worcester and Leicester.

See Appendix B1 for a visual representation of the 20 mile routes.
During our analysis of the maps, Google Maps provided an approximate walking speed of 3 miles per hour, therefore a 20 mile route would take most participants roughly 6-7 hours to complete. Based on our research on the AVON Walk, Relay for Life, and the Take Back the Night walk, we deemed an appropriate walking length for people of any fitness level to be 7.5 miles. Following this conclusion, Plan A was seen as too long for the event we had in mind.

Finally, each route was driven in completion, allowing us to take pictures and most importantly, examine the businesses, road and travel features, and scenery along the way. In doing so, we concluded that the length of a 20-mile walk would not attract many participants. Further, we identified that the concept of the three separate routes does not have potential to unify the communities towards the common goal of a healthy lifestyle. The negatives outweighed the positives regarding the 20-mile routes, therefore we decided to abandon Plan A: 20 Mile Routes, and search for a shorter and less strenuous alternative.

**Finding 3**

**A CHIP Walk of approximately 3 miles in length was deemed infeasible.**

After Plan A was deemed infeasible, we created Plan B: Community Routes. We developed small walks that looped through or around the center of each town, as the continuous loop style would provide participants with easy access to and from their parked cars.

We also looked to shorten the routes, and in doing so devised Plan B that encompasses 7 smaller routes, one per town, with each being 3-3.5 miles in length. Ideally each walk would occur on the same day and same time.

The City of Worcester’s community route starts and ends at Worcester City Hall. With a total of 3.5 miles, this route begins on Main St and heads toward Salisbury St passing the Worcester Art Museum, WPI, and Institute Park. Next, participants would walk onto Park Ave passing Elm Park and finally looped around back to Pleasant St. From here the route entered Main St arriving back at Worcester City Hall.

The town of Leicester’s community route starts and ends at Leicester Public Library. With a total of 3.4 miles, this route begins on Main St and heads toward Henshaw St passing Becker College and Leicester Police Department. Next, participants would walk onto Willow Hill Rd and finally looping back toward Main St, arriving back at Leicester Public Library.

The town of Millbury’s community route starts and ends at Millbury Public Library. With a total of 2.8 miles, this route begins on West St and heads to Hamilton St. From here, participants would walk onto Howe Ave passing Howe Pond and finally looping back toward Canal St. On Canal St, participants may pass local businesses returning toward River St, arriving back at Millbury Public Library.
The town of Grafton’s community route starts and ends at the Grafton Town Commons. With a total of 3.5 miles, this route begins on Upton St, passing Grafton Public Library and Grafton Fire Department. Next, participants would walk onto Sibley St heading towards Bruce St and then Providence Rd. From this location, the route loops back onto Millbury St, arriving back at Grafton Town Commons.

The town of Shrewsbury’s community route starts and ends at Shrewsbury Public Library. With a total of 3.0 miles, this route begins passing through Shrewsbury Commons. Next, participants would walk onto Spring St heading toward School St, passing Dean Park and Dean Park Pond. From this location, the route loops back onto Main St, arriving back at Shrewsbury Public Library.

The town of West Boylston’s community route starts and ends on Worcester St. With a total of 2.9 miles, this route begins on Worcester St heading toward West Boylston St. Next, participants would walk onto Crescent St passing Goodale Park and West Boylston Middle/High School. From this location, the route loops around arriving back on Worcester St.

Lastly, the town of Holden’s community route starts and ends on Main St. With a total of 2.8 miles, this route walks on Lowell Rd and heads toward Highland St. From this location, the route loops around arriving back on Main St.

Though a viable option for the CHIP Walk, our sponsors felt that because the plan did not traverse through many of the seven towns as one route, it would not coincide with end goal of the CHIP. The idea of each community working toward a common goal is important to the DPH, therefore we ultimately abandoned Plan B: Community Routes to come up with Plan C: The Convergence Walk.

Finding 4

Plan C: The Convergence Walk is the most unifying of the three plans.

The third CHIP Walk option that was devised was Plan C: The Convergence Walk. The following list highlights primary features of this plan:

a. All 7 towns are included in this 1 route.
b. Many key locations, including health-related businesses, historic buildings, schools and scenic routes, were identified in each of the 7 communities.
c. Walking a length of about 7.5 miles elicits a reasonable time.

The Convergence Walk encompasses starting points in each of the seven municipalities with one central end location of the DCU Center. We chose the central location to be the DCU Center in Downtown Worcester, much to the delight of our sponsors. After preliminary approval of this plan from our sponsors, we researched high
schools or other businesses with large public parking lots in each town to find a starting location for each route.

We then mapped seven routes from Grafton, Holden, Leicester, Millbury, Shrewsbury, West Boylston and Worcester to end at the DCU Center in Worcester, shown in Figure 3 below. This was the most critical step, as we needed to alter each route to avoid busy highways, roads and extreme hills, and find areas with sidewalks and wide roads. After the alterations, six of these routes became varied in length from 5 to 9 miles, which was a positive as a reasonable walking length was deemed to be 7.5 miles. The Worcester route, beginning at Doherty High School and ending at the DCU Center, totaled 2.1 miles in length, which poses a less strenuous alternative to the longer routes.

Figure 3: Visual representation of Convergence Route

We chose Plan C: The Convergence Walk for a variety of reasons. This plan includes routes that are much shorter than Plan A: 20 Mile Routes, but longer than Plan B: Community Routes. Secondly, the walk includes all seven communities, each route converging at the DCU Center and thus promoting the “togetherness” factor strived for by the DPH and CHIP. The idea of a rally at the DCU Center will promote good health and well-being. Here participants can learn more about the healthy resources and options they have access to and how to exploit said resources to the fullest. The rally idea was an added dimension that the other two options simply did not have. For all of these reasons, the Convergence Walk was deemed the most feasible and promising option.
Following are visual representations of each route in Plan C.

Plan C: The Convergence Walk

1) Shrewsbury
   Begins at Shrewsbury Senior High School

![Figure 4: 7.3 mile Route in Shrewsbury](image)

2) Grafton
   Begins at Wyman-Gordon Public Soccer Field

![Figure 5: 5.98 mile Route in Grafton](image)
3) Millbury
Begins at Millbury Memorial High School
Utilizes Blackstone River Bikeway

![Figure 6: 5.85 mile Route in Millbury](image)

4) Leicester
Begins at Leicester High School

![Figure 7: 8.6 mile Route in Leicester](image)
5) Holden
Begins at Wachusett Regional High School

Figure 8: 8.26 mile Route in Holden

6) West Boylston
Begins at West Boylston Middle High School

Figure 9: 8.22 mile Route in West Boylston
7) Worcester

Begins at Doherty Memorial High School

![Figure 10: 2.1 mile Route in Worcester](image)

The following is a table consisting of each road within the respective convergence routes.

Table 1: List of each road within the individual city routes (*red represents starting location and blue represents converging streets within different routes)

<table>
<thead>
<tr>
<th>Shrewsbury</th>
<th>Grafton</th>
<th>Millbury</th>
<th>Leicester</th>
<th>Holden</th>
<th>West Boylston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrewsbury Senior High School</td>
<td>Wyman-Gordon</td>
<td>Millbury High School</td>
<td>Leicester High School</td>
<td>Wachusett Regional High School</td>
<td>West Boylston Middle High School</td>
</tr>
<tr>
<td>Holden St</td>
<td>Grafton Rd</td>
<td>Blackstone River Bikeway</td>
<td>Winslow Ave</td>
<td>Main St</td>
<td>Cresent St</td>
</tr>
<tr>
<td>Clark St</td>
<td>Grafton St</td>
<td>Millbury St</td>
<td>Paxton St</td>
<td>Salisbury St</td>
<td>Central St</td>
</tr>
<tr>
<td>Burncoat St</td>
<td>Sunderland Rd</td>
<td><strong>Providence St</strong></td>
<td>Marshall St</td>
<td>Major Taylor Blvd</td>
<td>Worcester St</td>
</tr>
<tr>
<td>Millbrook St</td>
<td>Massasoit Rd</td>
<td>Harrison St</td>
<td>Prouty Ln</td>
<td><strong>DCU</strong></td>
<td>Maple St</td>
</tr>
<tr>
<td>Grove St</td>
<td>Heywood St</td>
<td>Green St</td>
<td>Pleasant St</td>
<td>Burncoat St</td>
<td></td>
</tr>
<tr>
<td>Main St</td>
<td>Winthrop St</td>
<td>Foster St</td>
<td>Chandler St</td>
<td>Lincoln St</td>
<td></td>
</tr>
<tr>
<td>Foster St</td>
<td><strong>Providence St</strong></td>
<td><strong>DCU</strong></td>
<td>Main St</td>
<td>Goldsberry St</td>
<td></td>
</tr>
<tr>
<td><strong>DCU</strong></td>
<td>Harrison St</td>
<td>Foster St</td>
<td>Summer St</td>
<td><strong>Martin Luther King Jr Blvd</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Green St</strong></td>
<td><strong>DCU</strong></td>
<td></td>
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<tr>
<td>Foster St</td>
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<tr>
<td><strong>DCU</strong></td>
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In conclusion, we are positive that CHIP Walk & Rally participants will be set on a path toward well-being. Beginning with the walk, we aim to show participants that they are not alone on this journey to a healthy place. Once the routes converge, the number of walkers will be multiplied by seven, inspiring everyone to rally together in one common vision.

Finding 5
Preliminary budget estimates are predicted to be at least $47,400.

Ann Gibbons-Smith, Assistant Executive Director of the Central Massachusetts Housing Alliance, Inc., offered us insight into the world of walk and rally event planning. The 30th Annual Walk+Run for the Homeless is a community event scheduled for May 17th, 2016. As family homelessness has increased 22% in the last year, the CMHA focuses on prevention rather than offering shelter. In Worcester, 187 families are in shelters, and 40 families are housed in motels. Mrs. Gibbons-Smith has years of experience planning a walking event, and places it on the same level as a planning a giant party.

We found out that police detail will be our greatest expense, however we do not need to hire EMS nor the fire department. Police are hired for a minimum of four hours, and even if they are utilized for less time than that, they are to be paid in full for the four hours. Since this event is only a walk and is not predicted to take extreme effort, Police and participants will be able to dial 911 for immediate help in the case of an emergency. Volunteer doctors will also be utilized during the event and at the rally.

Following our meeting with Ann Gibbons-Smith, which offered us insight into the Walk+Run for the Homeless, we were able to come up with a more accurate preliminary budget for the CHIP Walk. The Walk+Run is a 5k, which is 3.1 miles long and is similar in length to our CHIP Worcester Route at 2.1 miles. We analyzed the expenses that pertain to the CHIP Walk & Rally, and the safety expenses including the police detail were estimated to be our greatest expense. The cost of police detail for the Walk+Run was approximately $700.00. We felt that since we had seven routes in different towns, we would need to multiply that number by seven to bring the expense to $4,900.00. However, six of the seven routes traverse through at least two towns, being the town the route begins in and Worcester. Since police cannot cross town jurisdictions according to Ann Gibbons-Smith, we added another $4,200.00 to the expense. Finally, since the Grafton route crosses through Millbury before entering Worcester, we added another $700.00 to the budget to bring our final Police Detail expense to $9,800.00.

Next, obtainment of city permits were identified to be essential to the event planning process. For the Walk+Run for the Homeless, the total Parade Permits needed to cover the 5k equated to be $1,200.00 However, since the CHIP Walk & Rally would traverse seven jurisdictions and cover a lot more ground within the city of Worcester, we
had to at least multiply that amount by seven, to bring our final permit estimated expense to $8,400.00.

Another essential portion of the estimated budget was dedicated to the event location and transportation. We have identified the need to book the DCU Center due to its central location within Worcester and its ability to accommodate a large amount of people. Specifically, we identified the necessity to rent the DCU Exhibition Hall and Meeting Rooms. Through estimated budgets located on the DCU Center website, we have totaled the rally location expenses to be $6,500.00. While assessing transportation requirements, we have identified the need to rent 15 school buses. These school buses will provide participants with transportation back from the DCU Center to their respective starting location within one of the seven participating towns. With each bus costing $600.00 to rent, the estimated cost for the transportation expenses equates to $9,000.00.

We have also assessed the possibility of advertising expenses for promotional and marketing distributions. Professional printing companies such as VistaPrint specialize in printing posters for $4.00. With an estimated need of 350 printed posters, advertising expenses would equal $1,200.00. Lastly, we have identified $5,000.00 for potential t-shirt expenses and $10,000.00 for miscellaneous needs such as today of event expenses and room for estimation error within any of the other budget sections. With all previous budget estimates totaled we arrive at a final budget of $51,950.00. This budget is a rough estimate that represents a potential minimum cost for The CHIP Walk & Rally. This budget is a rough estimate that represents a minimum cost for the CHIP Walk & Rally, due to the fact that we have not yet added in the price of renting the DCU Arena. Prospective planners and future sponsors should expect a higher final budget. The full listing of the CHIP Walk & Rally Budget Estimate is available in Appendix C.

Finding 6

The DCU is an accommodating location for the rally event.

The DCU Center located on Foster St in Worcester, MA was chosen as the most ideal location due to its accommodation ability and high popularity among residents within the Greater Worcester area. The DCU Center has numerous complex features that have the ability to host an event such as The CHIP Walk & Rally. In specific, the exhibition hall has 58,960 square feet of contiguous space which we have identified to be an excellent location for tables, booths, music, and entertainment. For example, colleges such as WPI may volunteer Chartwells nutrition professionals to provide informational booths on how to live a healthy lifestyle by dieting. Other ideas include tables or booths that offer resources and suggestions about active living, suicide prevention, and rehabilitation.

While preliminary developing the activities and events of the Rally, we believe the presence of speakers, medical screenings, and prescription pill drop offs will be
beneficial health-related activities for participants. The meeting room space located within the DCU will provide a small and quiet space for such intimate activities. Possible CHIP Rally activities include chiropractic, CPR and First Aid Training, group exercise, health screenings, laughter yoga, martial arts demo, self-care demonstrations, and relaxation sessions. Possible CHIP Rally speakers include talks on avoiding injuries, improving health, cancer awareness and prevention, financial wellness, fitness, goal setting, preventative health, work/life balance, and stress reduction. Refer to Appendix D for a full list of possible rally activities and speakers and a full list of possible rally activities and speakers.
Chapter 5: Recommendations

Based on our research and findings, we deemed the CHIP Walk to be feasible and have performed preliminary steps to plan the community-wide event. We are confident that the success of the CHIP Walk & Rally is dependent upon the efforts of at least two follow-up projects; therefore we propose the following series of recommendations:

5.1 Formulate project teams to complete the CHIP Walk & Rally.

To successfully complete the development of the event, we suggest two follow up project teams to be assembled during Worcester Polytechnic Institute’s B and C Term of 2015-2016 academic calendar. However, if WPI is unable to provide a follow IQP team of students, we suggest our sponsor Dr. Hirsh utilizes resources and seeks additional help from previously affiliated students at UMass Memorial Medical Center and Clark University.

5.2 Understand the primary vision of the CHIP and DPH.

Before proceeding on with the development of the project event, we recommend each team fully understands the primary vision, goals, and services of the City of Worcester Division of Public Health and the CHIP. We also recommend reviewing and following up with the most recent reports, especially the 2015 Greater Worcester Region CHA and 2016 Greater Worcester Region CHIP.

5.3 Request approval from the City of Worcester for the CHIP Walk event.

The event is still within its preliminary stages due to the necessity of requesting approval from the seven towns within the Greater Worcester area. We recommend acquiring approval as soon as possible from each town, especially the City of Worcester due to the large amount of people who will be traveling into the downtown portion of the city. To achieve approval from the City of Worcester, approval must be granted from the Board of Health. Once approval is granted all other plans may be carried out with certainty.

5.4 Coordinate the date, budget, and specific location in the DCU Center.

Choosing a date for the event and booking a specific location are important tasks needed to successfully complete the CHIP Walk & Rally. It is crucial to pick date as soon as possible due to the time frame allocated for this event. To attract participants from each town, we recommend scheduling the event within the first 8 to 19 days of May. This timeframe escapes holidays such as Mother’s and Father’s Day, as well as prom season and graduation dates. To avoid any logistical problems, we suggest immediate coordination of the event’s date and booking the DCU Center on this chosen date. When booking the space within the DCU center, the budget should be taken into account and
negotiated if possible. We also recommend the organization of the budget to avoid any financial problems that may arise.

5.5 Obtain all necessary permits.

Massive scale events that attract a large number of people require parade permits. These permits can be obtained through in each particular city and grant access to all needed roads. We suggest obtaining any permits necessary for the event once the date and official location of event have been chosen. There is also the possibility of giving away or selling healthy foods at the rally event. For this to occur, we suggest acquiring proper food permits for the location. However, if food trucks are present, permits will not be required because the food truck are legally certified to sell food themselves.

5.6 Contact local businesses and potential partners, colleges and youth schools, and public safety departments along each route, located in Appendix A.

Reaching out to the community is crucial in the planning and publicizing process of this event. Local businesses and potential partners have the ability to fundraise towards the budget and spread individual health-related knowledge at the event by having a table/booth within the DCU Center. We suggest contacting all local businesses and potential partners listed in Appendix A1, A2 and proposing the possibility of sponsoring the event. We also recommended contacting all colleges (Appendix A4) and public youth schools (Appendix A5). Colleges and public youth schools have the ability to participate in this event, as well as, volunteer. Due to the need for traveling safety during the walking portion of this event, we suggest contacting the police departments within each participating community. The full listing of each department is listed in Appendix A5.

5.7 Promote the CHIP Walk & Rally through social media, distribution of flyers, and local media outlets.

Once the final coordinating steps have been completed it is essential that the projects teams begin advertising the event to the public. To attract many participants, we suggest distributing creative and colorful flyers to all local businesses and schools within the Greater Worcester area. Social media is an essential marketing tool used to reach out to people all over the world. This marketing tool can be utilized to spread the word through the state, allowing for free mass marketing and the potential of attracting participants/supporters from various locations. Lastly, we recommend contacting local media outlets such as television stations, radio stations, and newspapers. These local outlets will directly reach out to the target community and provide a low cost publicity option.

These suggestions, if implemented, will successfully carry out the CHIP Walk & Rally. In addition, we hope that our research assisted appropriately in the creation of this large-scale event and in turn, will provide a celebratory educational outlet to the Greater Worcester area. This research has the potential to be used to display the
preliminary and secondary steps needed to plan a walk and rally event of this magnitude.
Bibliography


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56
## Appendix A: Contact Listings

### A1: Businesses & Attractions by Route

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<thead>
<tr>
<th>Town</th>
<th>Healthy Businesses</th>
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<td>Public Soccer field (outside Wyman-Gordon)</td>
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<td>The Farm Stand</td>
<td>(508) 795-8700</td>
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<td></td>
<td>Gibson Brothers Dairy Farm</td>
<td>(508) 795-1099</td>
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<td>Price Chopper</td>
<td>(508) 752-7081</td>
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<td>Snap Fitness 24/7</td>
<td>(508) 791-7627</td>
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<td>Radius Health Care Center of Worcester</td>
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<td>YWCA</td>
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<td>(508) 754-1234</td>
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<td>(508) 727-9220</td>
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<td></td>
<td>Hot Dog Annies</td>
<td>(508) 892-9099</td>
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<td>West Tatnuck Elementary School</td>
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<td>(508) 798-9994</td>
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<td>(508) 929-8000</td>
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<td>Chandler Pediatrics</td>
<td>(508) 752-4511</td>
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<td>Child Development &amp; Education</td>
<td>418 Main Street #2, Worcester, MA 01608</td>
<td>(508) 834-7088</td>
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<td>Spectrum Health Systems</td>
<td>10 Mechanic Street #302, Worcester, MA 01608</td>
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<td>Salvation Army Worcester</td>
<td>640 Main St, Worcester, MA</td>
<td>(508) 766-791</td>
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<td></td>
<td>The Shoppes at Blackstone Valley</td>
<td>70 Worcester-Providence Turnpike, Millbury, MA 01527</td>
<td>(774) 232-8000</td>
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<td></td>
<td>Walmart Super Center</td>
<td>25 Tobias Boland Way, Worcester, MA</td>
<td>(508) 769-3630</td>
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<td></td>
<td>Vernon Hill (School, Playground)</td>
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<td>(508) 769-3630</td>
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<td>St. Vincent Hospital-Vernon Hill Campus</td>
<td>123 Summer Street, Worcester, MA 01608</td>
<td>(508) 363-5000</td>
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<td>Sally Storm Dance Studio</td>
<td>9 Harrison Street, Worcester, MA</td>
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<td>Gold as Gold Coffee</td>
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<td>St. Vincent Hospital</td>
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<td></td>
<td>Una Chicago Grill</td>
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<td>American Red Cross</td>
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<td>Summit EiderCare</td>
<td>277 E. Mountain St, Worcester, MA</td>
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<td>Habitat for Humanity Restore</td>
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<td>Darby's Bakery</td>
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<td>First Congregational Church</td>
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<td></td>
<td>Masonic Lodge</td>
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<td>(508) 835-3232</td>
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<td>Our Lady of Good Council</td>
<td>111 Worcester St, West Boylston, MA</td>
<td>(508) 836-3606</td>
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<td>Pediatric Behavioral Health</td>
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<td>(508) 363-5000</td>
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<td>Women's Health of Central Mass</td>
<td>100 Martin Luther King Jr Blvd #210, Worcester, MA</td>
<td>(508) 690-0096</td>
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<td>(508) 754-1513</td>
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<td>Blue Jeans Pizza</td>
<td>270 Park Ave, Worcester, MA</td>
<td>(508) 753-3777</td>
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<td>Ed Hyder's Mediterranean Marketplace</td>
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<td>(508) 755-0258</td>
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<td>(508) 795-1190</td>
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<td>Union Station Farm</td>
<td>344 Pleasant St, Worcester, MA</td>
<td>(508) 762-9345</td>
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<td>Polka Barrel Dell</td>
<td>320 Pleasant St, Worcester, MA</td>
<td>(508) 794-0591</td>
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<td>Shanghai-La</td>
<td>50 Front St, Worcester, MA</td>
<td>(508) 795-0698</td>
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<td>110 Front St, Worcester, MA</td>
<td>(508) 752-6001</td>
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<td>Viva Bene Ristorante</td>
<td>144 Commercial St, Worcester, MA</td>
<td>(508) 799-9099</td>
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Figure 11: Businesses and attractions contact by route
## A2: Key Partner Contacts

### Table: Key Partner Contacts

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<tr>
<td>Worcester Community Project Center</td>
<td>Craig Sennett, Director</td>
<td>(508) 888-7877</td>
<td><a href="mailto:csemmitt@wcpa.org">csemmitt@wcpa.org</a></td>
<td>44 Portland St, Worcester, MA</td>
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<td></td>
<td>Laura Roberta, Assistant Director</td>
<td>(508) 215-5594</td>
<td><a href="mailto:lroberta@wcpa.org">lroberta@wcpa.org</a></td>
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<tr>
<td></td>
<td>John Zauger, Project Advisor</td>
<td>(744) 236-2818</td>
<td><a href="mailto:jzauger@wcpa.org">jzauger@wcpa.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester Division of Public Health</td>
<td>Dr. Michael P. Hirsh, MD, Acting Commissioner</td>
<td>(508) 799-8193</td>
<td><a href="mailto:mhirsh@worcesterma.gov">mhirsh@worcesterma.gov</a></td>
<td>25 Meads St, Worcester, MA</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Ethan Calhoun, Public Health Consultant</td>
<td></td>
<td><a href="mailto:ucalhoun@worcesterma.gov">ucalhoun@worcesterma.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kariylin Nixon, Chief of Community Health</td>
<td></td>
<td><a href="mailto:knixon@worcesterma.gov">knixon@worcesterma.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Central Massachusetts Housing Alliance, Inc.</td>
<td>Ann Gobran-Smith, Assistant Executive Director</td>
<td>(774) 213-2160</td>
<td><a href="mailto:agobran-smith@cmhaonline.org">agobran-smith@cmhaonline.org</a></td>
<td>5 Institute Rd, Worcester, MA</td>
<td>Yes</td>
</tr>
<tr>
<td>UMass Medical</td>
<td>Human Resources Department</td>
<td>(508) 545-2300</td>
<td><a href="mailto:umass@umassmed.edu">umass@umassmed.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Office of Communications</td>
<td>(508) 295-2192</td>
<td><a href="mailto:umasscommunications@umassmed.edu">umasscommunications@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ward Zanor</td>
<td>(508) 545-2300</td>
<td><a href="mailto:ward.zanor@umassmed.edu">ward.zanor@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evan Pagonio</td>
<td>(774) 572-0189</td>
<td><a href="mailto:evan.pagonio@umassmed.edu">evan.pagonio@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UMass Medical</td>
<td>Human Resources Department</td>
<td>(508) 545-2300</td>
<td><a href="mailto:umass@umassmed.edu">umass@umassmed.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Office of Communications</td>
<td>(508) 295-2192</td>
<td><a href="mailto:umasscommunications@umassmed.edu">umasscommunications@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ward Zanor</td>
<td>(508) 545-2300</td>
<td><a href="mailto:ward.zanor@umassmed.edu">ward.zanor@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evan Pagonio</td>
<td>(774) 572-0189</td>
<td><a href="mailto:evan.pagonio@umassmed.edu">evan.pagonio@umassmed.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DCU Center</td>
<td>Anna Bunting, Director of Community Affairs</td>
<td>(508) 792-6900</td>
<td><a href="mailto:abunting@dcu.edu">abunting@dcu.edu</a></td>
<td>56 Foster St, Worcester, MA, 01606</td>
<td></td>
</tr>
<tr>
<td>Fallon Health</td>
<td>Kimberly Samson, Director of Community Relations</td>
<td>(508) 985-8499</td>
<td><a href="mailto:ksamson@dcu.edu">ksamson@dcu.edu</a></td>
<td>10 Chestnut St, Worcester MA</td>
<td></td>
</tr>
<tr>
<td>Common Pathways</td>
<td>Clare Savage, Director</td>
<td>(508) 455-9394</td>
<td><a href="mailto:clare.savage@commonwealth.org">clare.savage@commonwealth.org</a></td>
<td>54 Elm St, Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Melanie Luna, Administrative Assistant</td>
<td>(508) 455-9394</td>
<td><a href="mailto:melanie.luna@commonwealth.org">melanie.luna@commonwealth.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts College of Pharmacy and Health Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C. Anderson, Assistant Director Office of Student Activities</td>
<td>(508) 373-5979</td>
<td><a href="mailto:c.anderson@mph.edu">c.anderson@mph.edu</a></td>
<td>Boston, MA</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 12: Key partner contacts*
## A3: Public Youth Schools

### Appendix A: Contact Listing

**A3: Public Youth Schools**

<table>
<thead>
<tr>
<th>Town</th>
<th>High Schools</th>
<th>Phone</th>
<th>Middle Schools</th>
<th>Phone</th>
<th>Elementary Schools</th>
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<tbody>
<tr>
<td>Grafton</td>
<td>Grafton High School</td>
<td>(508) 839-542</td>
<td>Grafton Middle School</td>
<td>(508) 839-542</td>
<td>Milbury Street Elementary School</td>
<td>(508) 839-0757</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>North Grafton Elementary School</td>
<td>(508) 839-5483</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>South Grafton Elementary School</td>
<td>(508) 839-5484</td>
</tr>
<tr>
<td>Holden</td>
<td>Holden High School</td>
<td>(925) 254-019</td>
<td>Mohonkew Middle School</td>
<td>(508) 829-5077</td>
<td>Davis Hill Elementary School</td>
<td>(508) 825-7154</td>
</tr>
<tr>
<td></td>
<td>Wiscasset Regional High School</td>
<td>(508) 829-8777</td>
<td></td>
<td></td>
<td>Dawson Elementary School</td>
<td>(508) 829-9528</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hidden Christian Academy (K-8)</td>
<td>(508) 825-4418</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mayo Elementary School</td>
<td>(508) 825-3203</td>
</tr>
<tr>
<td>Leicester</td>
<td>Leicester High School</td>
<td>(508) 852-705</td>
<td>Leicester Middle School</td>
<td>(508) 852-705</td>
<td>Leicester Memorial Elementary School</td>
<td>(508) 852-7046</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Leicester Primary School</td>
<td>(508) 852-7250</td>
</tr>
<tr>
<td>Millbury</td>
<td>Millbury Memorial Jr./Sr. High School (7-12)</td>
<td>(508) 865-5841</td>
<td></td>
<td></td>
<td>Elmwood Street School (PK-3)</td>
<td>(508) 865-5841</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Raymond E. Snow Elementary School (4-8)</td>
<td>(508) 865-3841</td>
</tr>
<tr>
<td>Shrewsbury</td>
<td>Shrewsbury Senior High School</td>
<td>(508) 841-886</td>
<td>Oak Middle School</td>
<td>(508) 841-120</td>
<td>Floral Street School</td>
<td>(508) 841-8720</td>
</tr>
<tr>
<td></td>
<td>St. John's High School (Private)</td>
<td>(508) 842-889</td>
<td>Sherwood Middle School</td>
<td>(508) 841-892</td>
<td>Spring Street Elementary School</td>
<td>(508) 841-8700</td>
</tr>
<tr>
<td>West Boylston</td>
<td>West Boylston Jr./Sr. High School (6-12)</td>
<td>(508) 838-4475</td>
<td></td>
<td></td>
<td>Walter J. Patton Elementary School</td>
<td>(508) 841-8826</td>
</tr>
</tbody>
</table>

**Figure 13: Public youth school contacts**
### Appendix A: Contact Listing

#### A4: Colleges & Universities

<table>
<thead>
<tr>
<th>College/University</th>
<th>Department/Organization/Name</th>
<th>Phone</th>
<th>Email</th>
<th>Location</th>
<th>Table? (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna Maria College</td>
<td>Student Activities Office</td>
<td>--</td>
<td><a href="mailto:studentactivities@annamaria.edu">studentactivities@annamaria.edu</a></td>
<td>Fitchburg, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Wellness Awareness Team</td>
<td>--</td>
<td><a href="mailto:maria@annamaria.edu">maria@annamaria.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Action Group</td>
<td>--</td>
<td><a href="mailto:socialactiongroup@annamaria.edu">socialactiongroup@annamaria.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Andrea Klein, Vice President for Student Success</td>
<td>(508) 549-3317</td>
<td><a href="mailto:klein@annamaria.edu">klein@annamaria.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumption College</td>
<td>Student Activities Office</td>
<td>(508) 767-7423</td>
<td><a href="mailto:hilton@assumption.edu">hilton@assumption.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hanan Fathi, Director of Student Activities and Leadership Development</td>
<td>(508) 767-7451</td>
<td><a href="mailto:h.fathi@assumption.edu">h.fathi@assumption.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elyse Gavrin, Graduate Assistant</td>
<td>(508) 767-7117</td>
<td><a href="mailto:egavrin@assumption.edu">egavrin@assumption.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Becker College</td>
<td>Tracey Polkatis-Cobham, Director of Campus Activities &amp; Student Leadership Development</td>
<td>(774) 354-0416</td>
<td><a href="mailto:tracey.cobham@becker.edu">tracey.cobham@becker.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patrick Hickey, Assistant Director of Campus Activities &amp; Student Leadership Development</td>
<td>(774) 354-0415</td>
<td><a href="mailto:phickey@becker.edu">phickey@becker.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clark University</td>
<td>Dean of Students Office</td>
<td>(508) 785-7425</td>
<td><a href="mailto:dos@clarku.edu">dos@clarku.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Denise D'Ambra, Vice President for Student Affairs and Dean of Students</td>
<td>--</td>
<td><a href="mailto:dambra@clarku.edu">dambra@clarku.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of the Holy Cross</td>
<td>Office of Student Involvement</td>
<td>(508) 793-246</td>
<td><a href="mailto:osh@holycross.edu">osh@holycross.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td>Fitchburg State University</td>
<td>Volunteer Center</td>
<td>978-665-2649</td>
<td><a href="mailto:jlaurens@fitchburgstate.edu">jlaurens@fitchburgstate.edu</a></td>
<td>Fitchburg, MA</td>
<td></td>
</tr>
<tr>
<td>Quinsigamond Community College</td>
<td>Fuller Student Center</td>
<td>(508) 642-4226</td>
<td></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult Community Learning Center</td>
<td>978-751-7003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester Polytechnic Institute</td>
<td>Student Activities Office</td>
<td>(603) 851-5200</td>
<td><a href="mailto:sao@wpi.edu">sao@wpi.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christina Grouard, Associate Director of Student Activities</td>
<td>(603) 851-566</td>
<td><a href="mailto:cgrouard@wpi.edu">cgrouard@wpi.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kim Wylka</td>
<td>(603) 851-840</td>
<td><a href="mailto:kwylka@wpi.edu">kwylka@wpi.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester State University</td>
<td>Student Center</td>
<td>(508) 825-8077</td>
<td><a href="mailto:wsu@worcester.edu">wsu@worcester.edu</a></td>
<td>Worcester, MA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Julie Kazarian, Dean of Students and Chief Student Affairs Officer</td>
<td>--</td>
<td><a href="mailto:jkazarian@worcester.edu">jkazarian@worcester.edu</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 14:** College and university contacts in the Greater Worcester region

#### A5: Public Safety By Town

<table>
<thead>
<tr>
<th>Town</th>
<th>Fire</th>
<th>Police</th>
<th>EMS</th>
<th>Key Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grafton</td>
<td>Phone: (508) 839-4806</td>
<td>Phone: (508) 839-5343</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 839-8520</td>
<td>Fax: (508) 839-0106</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holden</td>
<td>Phone: (508) 210-5650</td>
<td>Phone: (508) 210-5680</td>
<td>Phone: (508) 854-0111</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 210-5657</td>
<td>Fax: (508) 829-9175</td>
<td>Fax: (508) 853-3672</td>
<td></td>
</tr>
<tr>
<td>Leicester</td>
<td>Phone: (508) 892-7022</td>
<td>Phone: (508) 892-7010</td>
<td>Phone: (508) 892-7006</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 892-7044</td>
<td>Fax: (508) 892-7012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milbury</td>
<td>Phone: (508) 865-5328</td>
<td>Phone: (508) 865-3521</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 581-9800</td>
<td>Fax: (508) 865-5164</td>
<td>After Hours: (508) 696-9482</td>
<td></td>
</tr>
<tr>
<td>Shrewsbury</td>
<td>Phone: (508) 841-8522</td>
<td>Phone: (508) 841-8577</td>
<td>Phone: (508) 841-8422</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 841-8545</td>
<td>Fax: (508) 841-8494</td>
<td>Fax: (508) 842-0587</td>
<td></td>
</tr>
<tr>
<td>West Boylston</td>
<td>Phone: (508) 835-3233</td>
<td>Phone: (508) 835-3233</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 835-2986</td>
<td>Fax: (508) 835-3821</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worcester</td>
<td>Phone: (508) 799-1819</td>
<td>Phone: (508) 799-8800</td>
<td>Phone: (508) 421-5700</td>
<td>Public Information Officer</td>
</tr>
<tr>
<td></td>
<td>Fax: (508) 799-1819</td>
<td>Fax: (508) 799-8860</td>
<td>Alt. Phone: (508) 421-5705</td>
<td>Lieutenant Annmarie Pickett</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Phone: (508) 799-1829</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Email: <a href="mailto:wdp@worcesterma.gov">wdp@worcesterma.gov</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Email: <a href="mailto:picketta@worcesterma.gov">picketta@worcesterma.gov</a></td>
</tr>
</tbody>
</table>

**Figure 15:** Public safety contacts by town
A6: Local News Contacts

<table>
<thead>
<tr>
<th>Program</th>
<th>Key Contact Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Worcester Telegram</td>
<td>Karen Webber: Managing Editor/Local News</td>
<td>(508) 793-9100</td>
<td><a href="http://www.telegram.com">www.telegram.com</a></td>
</tr>
<tr>
<td>WTAG</td>
<td></td>
<td>(508) 793-9232</td>
<td><a href="mailto:karen.webber@telegram.com">karen.webber@telegram.com</a></td>
</tr>
<tr>
<td>Jim Polito Show</td>
<td>Jim Polito</td>
<td>(508) 755-0056</td>
<td><a href="mailto:jim@wtag.com">jim@wtag.com</a></td>
</tr>
<tr>
<td>Jordan Levy Show</td>
<td>Jordan Levy</td>
<td>(508) 755-0056</td>
<td><a href="mailto:jordan@wlag.com">jordan@wlag.com</a></td>
</tr>
<tr>
<td>Channel 11: Worcester Public Schools</td>
<td>Joe Brindisi, Station Manager</td>
<td>(508) 751-7633</td>
<td><a href="mailto:channel11@worc.k12.ma.us">channel11@worc.k12.ma.us</a></td>
</tr>
</tbody>
</table>

Figure 16: Local news contacts
Appendix B: Walking Route Plans

B1: Plan A: 20 Mile Routes
Possible Route 1: 20 Mile Route Beginning and ending at Holy Cross via Worcester, Millbury, Grafton and Shrewsbury.

Route 1 Notes:

- Start at Holy Cross: Loyola Rd
  - Head into Millbury and Grafton
  - Walk on N. Main St into Shrewsbury
  - Towards Coal Mine Brook in Worcester
  - Pass UMass Medical (Worcester)
- End at Holy Cross: Loyola Rd

Figure 17: Overview of Route 1: 20 miles (Worcester, Millbury, Grafton and Shrewsbury)
Possible Route 2: 21.4 Mile Route Beginning and ending at Elm Park via Worcester, West Boylston and Holden.

Route 2 Notes:

- Start at Elm Park in Worcester
  - Walk on Harvard St
  - Shrewsbury St into West Boylston
  - Goodale St into Holden
  - Newell Rd into Park Ave, Worcester
- End at Elm Park

Figure 18: Overview of Route 2: 21.4 miles (Worcester, West Boylston and Holden)
Possible Route 3: 16 Mile Route that begins and ends at Newton Hill/Elm Park via Worcester and Leicester.

Route 3 Notes:

- Starts at Elm Park School, Worcester
- Walk on Bailey St passing Worcester Airport
- Marshall St to N. Main St
- Chestnut St to Park Ave
  - Passing: Worcester Art Museum, WPI, and Institute Park
- End at Elm Park

Figure 19: Overview of Route 3: 16 miles (Worcester and Leicester)
B2: Plan B: Community Routes
This sub-appendix includes the alternative route plans which include seven small CHIP Walks in each community of approximately 3 miles in length.

1) Worcester

Worcester Route Notes:
- Start at Worcester City Hall
  - Walks on Main St to Salisbury St
    - Passing Worcester Art Museum, WPI, and Institute Park
  - Walk on Park Ave
    - Passing Elm Park
  - Pleasant St to Main St
- End at Worcester City Hall

Figure 20: 3.4 mile Route in Worcester
2) Leicester

Leicester Route Notes:

- Start at Leicester Public Library
  - Walks on Main St to Henshaw St
    - Passing Becker College, Leicester Police Department
  - Willow Hill Rd back to Main St
- End at Leicester Public Library

Figure 21: 3.4 mile Route in Leicester
3) Millbury

Millbury Route Notes:

• Start at River St, nearby Millbury Public Library
  o Walks on West St to Hamilton St
  o Howe Ave passing Howe Pond
  o Millbury Ave to Riverlin St
  o Canal St/Elm St
    ▪ Passing local business
• End at River St

Figure 22: 2.8 mile Route in Millbury
4) Grafton

Grafton Route Notes:

- Start at Grafton Town Commons
  - Walks on Upton St
    - Passing Grafton Public Library, Grafton Fire Dept.
  - Sibley St to Bruce St
  - Providence Rd to Millbury St
- End at Grafton Town Commons

Figure 23: 3.5 mile Route in Grafton
5) Shrewsbury

Shrewsbury Route Notes:

- Start at the Shrewsbury Public Library
  - Pass through Shrewsbury Common
  - Walk on Spring St to School St
    - Past Dean Park, Dean Park Pond
  - Walk on Main St
- End at the Shrewsbury Public Library

Figure 24: 3.0 mile Route in Shrewsbury
6) West Boylston

West Boylston Route Notes:

- Start on Worcester St
  - Walks on W Boylston St to Prospect St
  - Crescent St passing Goodale Park, West Boylston Middle/High
- End at Worcester St

Figure 25: 2.9 mile Route in West Boylston
7) Holden

Holden Route Notes:

- Start on Main St
  - Walks on Lowell Rd to Highland St
- End on Main St

Figure 26: 2.8 mile Route in Holden
Appendix C: Budget Estimate

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Expenses</td>
<td>$51,950.00</td>
</tr>
<tr>
<td>Safety Expenses</td>
<td>$18,200.00</td>
</tr>
<tr>
<td>Police Detail</td>
<td>$9,800.00</td>
</tr>
<tr>
<td>Parade Permits</td>
<td>$8,400.00</td>
</tr>
<tr>
<td>DCU Center</td>
<td>$6,500.00</td>
</tr>
<tr>
<td>Meeting Rooms</td>
<td>$2,050.00</td>
</tr>
<tr>
<td>Exhibition Hall</td>
<td>$6,500.00</td>
</tr>
<tr>
<td>Transportation</td>
<td>$9,000.00</td>
</tr>
<tr>
<td>School Buses (15)</td>
<td>$9,000.00</td>
</tr>
<tr>
<td>Other</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>Advertising</td>
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</tr>
<tr>
<td>Posters/Flyers</td>
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</tr>
<tr>
<td>T-Shirts (optional)</td>
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</tr>
</tbody>
</table>

Figure 27: Total expenses budget
Figure 28: Pie chart of estimated budget percentages
Appendix D: Rally Ideas

The following is taken from the Moda Health “Wellness and Health Fair Planning Guide”:

Awareness and Educational Information

- Self-care information
- Humor and its health benefits
- Back care
- Child safety
- Office safety
- Recycling
- Organic produce
- Stress information
- Ergonomics
- Recreational safety
- Women’s/Men’s health issues
- Nutritional information
- Dental and oral health
- First aid and emergency preparedness
- Childcare resources
- Cancer and preventive exam schedules
- Substance abuse information

Lifestyle information and screenings

- Blood pressure
- Body mass index (BMI)
- Bone density testing
- Health Risk Assessments
- Flexibility testing
- Glucose testing
- Mobile mammography
- Nutritional analysis
- Total cholesterol testing
- Hearing

Demonstrations and activities

- Chair massages
- CPR
- Yoga
- Exercise equipment demonstrations
• Healthy cooking
• First aid
• Emergency preparedness
• Ergonomics
• Martial arts
• Proper lifting
• Aerobic step demonstrations
• Laughter yoga
• Onsite massage therapy
• Active meditation
• Group exercise

Speakers
• Avoiding injuries
• Back health
• Cancer awareness and prevention
• Financial wellness
• Fitness
• Goal setting
• Healthy home
• Nutrition
• Work/Life balance
• Stress reduction
• Mindfulness
• Preventive health

Safety
• An accident prevention display
• Fire extinguisher demonstrations
• Carbon monoxide poisoning information

Food service
• Free samples healthy foods
• Discounts on certain food items the day of the event
• Food storage safety demonstration/education
Voluntary Organizations

Many of the following community organization can provide educational and informational materials:

- HIV/AIDS organizations
- American Cancer Society
- American Diabetes Association
- American Heart Association
- March of Dimes
- Mothers Against Drunk Driving
- Habitat for humanity

Providers of Health Promotion Programs

- Chiropractor/podiatrist offices
- Massage therapists
- Exercise equipment specialists
- Fitness Centers
- Local hospitals/clinics
Appendix E: Sample Promotion

Figure 29: Sample promotional flyer
Become the **HEALTHIEST YOU** in **HEALTHIEST REGION** by participating in

**The CHIP Walk**

[DAY] At [TIME] in Your Town

FINISH LINE RALLY: **DCU CENTER**

The City of Worcester Division of Public Health in partnership with UMass Memorial, Common Pathways and over 50 other community partners, drafted the Community Health Improvement Plan (CHIP). Since its creation in 2012, CHIP has improved access to healthy food and physical activity resources, expanded prescription drug collection programs, reduced the harmful impacts of tobacco through policy changes, developed mental health awareness campaigns, and instituted many more successful projects.

For more event info: [Website for info for each event/signup]

6 routes converging into 1 common finish line!
7 communities working together to accomplish 1 common goal!

The Greater Worcester region will be the Healthiest region in New England by 2020!

Figure 30: Sample promotional flyer 2
Figure 31: Sample website homepage

Figure 32: Sample website domain page
Figure 33: Sample website event schedule page

Figure 34: Sample website convergence route page